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## LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and to improve the character of the service rendered to the public.

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## SHIPBUILDING IN CANADA.

Mr. Arendt Angstrom, general manager of the Bertram Engine Works Co., Toronto, recently accorded an interview on the upbuilding of the Canadian merchant marine. He is of the opinion that the steel shipbuilding industry should be fostered by the Canadian government, owing to the disadvantages under which Canadian shipbuilders and owners labor.

Said Mr. Angstrom:

"The Canadian shipowner is at a great disadvantage compared to the English shipowner. He has to pay a somewhat higher price for a Canadian built steamer on account of the large amount of material entering into its construction on which the builder has to pay duty. Also, the Canadian inspection rules actually discriminate against the Canadian built vessels, under a Canadian register as compared with an English built vessel under an English register. The Canadian inspection rules regarding boilers are much more severe, rendering the boilers more expensive than those in English bottoms."

Continuing Mr. Angstrom said: "As it will be almost impossible for the Canadan government to impose any restrictions on the trading of English vessels in Canadian waters, the only remedy left will be to in some manner subsidize the Canadian vessels in order to bring them on equal footing commercially with English tonnage. This, of course, could be done either directly in the shape of bounties for tonnage built or by remitting duty paid on materials entering into the construction of Canadian built vessels. It is true that at the present time a small amount representing a part of the duty paid, is refunded to the shipbuilder, but this does not in any way cover the indirect additional cost of materials bought in Canada from protected industries. Under these circumstances it is evident that the government would have to, in some shape or other, assist the shipbuilding industry in Canada in order to put it on an equal footing with the English industry."

"We have in Canada, the best of raw materials for the steel and other materials entering into the construction of vessels. The labor market for industries of this kind generally is unsurpassed anywhere. What we actually require is the necessary conditions in order to attract capital to invest in what could not help being a large and prosperous industry, were it surounded by proper conditions, which Parliament alone could supply.

"Probably the simplest way would be to give to the shipbuilder a certain amount per ton turned out. The amount could only be fixed, of course, by enquiry into the circumstances already mentioned. At the present time Canadian shipbuilders' position is inferior from the point of view of investment to that of the English builder.

## FAST SHIPS APPROACH EACH OTHER RAPIDLY

In a recent number of Cassier's Magazine, Lieut. James H. Scott, of the U. S. revenue marine service refers to the danger of collision at sea between fast steamers—those of the 20-knot kind. In one paragraph he directs attention to the rapidity with which such vessels approach each other after the lights of one have been sighted on the other. He says:

"Two steam vessels, each having a speed of 21 knots an hour, approach each other, at night, end on, proceeding in opposite directions. These vessels complying fully with the law, have the mast-head lights visible at a distance of five miles and the side lights visible at a distance of two miles. The night is dark, the atmosphere clear, and the men on lookout pick up the lights the instant they become visible. When the vessels are, say five miles apart, the lookouts will report the masthead light of the approaching vessel to the officer on the bridge, who is able to see it immediately. He will, however, be unable to tell the other vessel's direction until her side lights are visible. These he will see when the vessels are about two miles apart, and are approaching the point of collision at the rate of 42 miles an hour. There are available two minutes and twenty-eight seconds for the ships' officers to see the lights, to make up their minds how they can best avert a collision, to give the order to port the helm, for the man at the wheel to obey the order, for the vessel to obey her helm, and for the ships to go clear. Does anyone say that the time is sufficient for all these agents to perform their several functions in ample time to avert a collision?"

## CHICAGO RIVER IMPROVEMENTS.

Congress has made an appropriation of $500,000 to continue the improvement of the Chicago river. This sum is to be used for constructing two or three basins in the river to enable vessels to turn. An appropriaton of $200,000 is made for a survey to determine the feasibility and cost of a navigable waterway 14 feet deep from Lockport to the Mississippi river. A survey is authorized to determine the feasibility of a waterway of 7 and 8 feet depth on the Illinois river, from La Salle to Ottawa. For the improvement of Quincy Bay, and removing the sandbar at Quincy, $20,000; for the maintenance and riprapping of the natural and artificial banks along the western shore of the Mississippi river from Warsaw to Quincy, $10,000. A survey with a view to ascertaining what improvement, if any, is desirable for the protection of the banks and levees on the Illinois side of the Ohio river from Mound City to Cairo. A survey is authorized with a view to ascertaining whether or not work at the harbor of Mound City is necessary for the preservation and improvement of that harbor. Permission is given the Fox River Navigable Waterway Association to construct a dam across tne Fox river below the highway bridge at McHenry.

## WONDERFUL IRON REGION OF SWEDEN.

In a New York paper Dr. Francis E. Clark thus describes the iron region of Sweden: It is one of the most wonderful in the world. Here are great hills, a thousand or fifteen hundred feet high or more, of almost pure iron ore. The ore lies in four great strata, and, if only three inches of this vast strata are taken off every year, a million tons of iron would be produced, an amount eual to the whole annual product of Sweden. This iron store produces nearly 70 per cent. of iron ore, and though not of the same high grade that makes the Swedish ore of the middle provinces of so much value for fine tools, the edges of pocket knives, etc., it is yet as vastly valuable, as it is an inexhaustible deposit. The fact that these iron mountains are in the heart of Lapland, in a latitude where the sun does not rise for seventeen days in midwinter, or set for seventeen davs in midsummer, has made them hitherto almost inaccessible and unknown, but now the scream of the locomotive is heard in these solitudes, the iron horse goes snorting to the very base of the mountains of iron, steam picks break up the ore, steam shovels load it on cars, and, through the long arctic winter night, as well as the long arctic summer day, the work of demolishing these iron mountains goes on; a work which at the present rate. so vast is the deposit, will not be accomplished for many a century.

## UNITED STATES COMMERCE.

Domestic trade movements for the first quarter of 1902 compared with those for the corresponding period in 1901 are reported in the March summary of international commerce by the Treasury Bureau of Statistics. These figures seem to indicate a continued increase in the volume of representative branches of commerce. The receipts of wheat at eight markets in the interior for the year 1901 up to April amount to 181,783,065 bushels, compared with 105,632,766 bushels for the corresponding period of 1902. There is thus a gain of 8.1 per cent. to the credit of the current quarter.

The commercial year's report on the pork packing industry confirms those figures of the increase of livestock traffic. The Cincinnati Price Current gives 25,411,675 head as the total of hogs packed in the western centers during the year ending March 1, compared with 23,600,674 head for the preceding year. The receipts of hogs at New York, Philadelphia and Baltimore, however, during the 12 months ending March 1, were the lowest in seven years.

Traffic on the Great Lakes for March was marked by the opening of local operations on the lower lakes and the clearing of a few cargoes of ore and wheat from the upper lake ports during the last week of the month. Receipts for March were 251,293 tons of freight compared with 183,918 tons in March, 1901. The March lake statement further shows that the domestic shipments of hard coal during the season of 1901 amounted to 3,310,323 tons; soft coal, 5,976,231 tons, and that 1,758,238 tons of coal were loaded for vessels' consumption at 121 lake ports by 126 different firms. The exports of coal from northern lake districts in 1901 amounted to 4,412,285 tons, compared with 5,054,158 tons during the calendar year 1900. The total shipments of coal on the lakes including coastwise and foreign for 1901, amounted to 15,457,077 tons, compared with 12,026,841 tons in 1900.

Coastwise coal shipments reported for seven months ending with February 28, from both Philadelphia and New York, were 3,782,201 tons, representing the trade by the principal barge lines and schooners. The receipts at Boston for the quarter just closed slightly exceeded one million tons.

Anthracite coal shipments for March were 3,813,767 tons compared with 4,964,353 tons in March, 1901, and 3,138,896 tons in 1900. The bituminous trade and the coke trade generally show gains up to the present date over shipments of a year ago. The average weekly shipments of coke in the Connellsville region to March 29 were 10,554 cars, compared with 10,398 cars to corresponding date in 1901. Approximately correct figures of oil shipments from the Beaumont, Texas, field, credit that district with 3,454,274 barrels of oil from the time shipments began in 1901 to March 31, 1902.

## LACK OF NOTICE TO MARINERS.

In its answer to the United States which brought suit for $4,000 alleged damages to the breakwater at Two Harbors, Minn., caused by the steamer Shenandoah colliding with it, the Davidson Steamship company states that the United States had given no public notice that there had been an extension made to the old breakwater.

The answer says that the outer end of the breakwater at Two Harbors had in all years prior to 1900 been marked by a red light, and that prior to July 24, 1901, the plaintiff had constructed a 500-foot extension to the old breakwater which was under water and not visible to a vessel approaching from the lake. On the night of July 24 the Shenandoah, loaded with ore and bound down from Duluth towing a barge, had to enter the port of Two Harbors on account of the heavy sea. A strong wind was blowing at the time and it was with some difficulty that the boat made her entraince. At that time there was a red light as usual at the end of the old breakwater and another white light on a 14-foot pole some distance from it. The officers of the boat thought the latter was from a vessel or a nearby dock, as the master and crew had not been in Two Harbors for some time.

While the boat went in on the breakwater, the answer declares, she was backed up as speedily as possible. The defendant further avers that there were no danger signals at the breakwater, but on the contrary those that were in place were such as to lure the mariner on to the breakwater. Then it is alleged that plaintiff had never given any public notice that an extension had been made, or that the system of the lights had been changed.

## DETROIT.

The car ferry St. Ignace is at the upper drydock for general overhauling.

The steamer J. J. Hill, which has been sold by the Morley Ship Building Co. to the Cook-Commer Steamship Co., of Philadelphia, has left for the coast. She will go into the lumber trade between Jacksonvlle and Philadelphia.

The following meteorological observations are furnished by the office of the U. S. Weather Bureau, Detroit, for the week ending April 20th. Prevailing wind direction for the week, west; highest velocity, 55 miles, from the S.W. on the 26th; mean temperature for the week 52, highest temperature, 68 on the 28th; lowest, 36 on the 24th.

The water fell to sixteen feet at the Limekiln Crossing last Sunday on account of the heavy gales prevailing. Early on Monday morning the water had fallen so low that the tidal guage no longer indicated the depth and traffic for the larger class of boats was blocked. With the cessation of the high winds the water has been gradually rising and the regular depth will soon be obtained again.

The Detroit Iron and Steel Co., in which M. A. Hanna & Co., and Pittsburg parties are interested, has been formed under Michigan laws with a capital of $1,500,000, divided equally between common and preferred stock. The furnace will be located at Delray, a short distance below Detroit, and will have a daily capacity of 300 tons. The plant will be completed early next year. The management is in the hands of M. A. Hanna & Co., and Senator Hanna will be president.

The steel cargo steamer, Wm. F. Fitch, built at Wyandotte by the Detroit Ship Building Co., and hailing from this port, has been granted official numbers by the Bureau of Navigaton, Treasury Department, Washington, D. C. Her tonnage is 3,629 gross and 2,632 net. The steamer will be turned over to her owners and leave on her first trip Saturday. Capt. Wm. Cummings, who was to sail her, was taken sick and returned to Cleveland. Capt. A. Greenly will take her out.

The talk about another race between the Tashmoo and City of Erie is not taken any stock of here. Last year's race proved that the Tashmoo was much the speediest boat in shoal water, and could steam away from the Erie in anything they could float in below ten fathoms. This she amply demonstrated to those on board of both boats during the race. In a trial from Cleveland to Port Huron the Erie would not be in the race at all. It seems to be as the RECORD stated at the time of the last and only race. The Tashmoo is the fastest river or light draft boat on the lakes and the Erie carries the broom in tall water or in any depth over a third of her own length.

Major W. H. Bixby, United States Engineer in charge of river and harbor improvements between Detroit river and Sault Ste. Marie, has returned here from a trip of inspection through St. Mary's river. While there he went carefully over the route of the new channel through the West Neebish. In his opinion it will be cheaper to cut a second channel down the west side of Neebish than to double the width of the old channel on the east side, while at the same time the west side route will save a mile or two and will be much less crooked. During his trip of inspection through Mud Lake, and the St. Mary's river, he noticed that in the middle Neebish the water was four or five feet low, that in Hay Lake it was three or four feet low, lower than it has ever been known to be before, and that the water above the "Soo" in Lake Superior is a foot below the level of this time last year.

The schooner Barklow from Marine City foundered in Lake Erie half a mile from Put-in-Bay last Saturday afternoon and three persons lost their lives, viz: Capt. Robert Pardy, of Marine City, his wife and his step-son, Alexander Morris, aged 16 years. Dick Burke, a sailor, of Port Huron, survived the wreck and was taken to Sandusky by the life-saving crew from that port, who had tried several times during the night to reach the wreck. According to Burke's story, when the boat seemed hopelessly in the power of the fearful storm, the party got into the rigging, the captain, his wife and Morris on the lee side. The boat soon filled and fell over on her beam ends, throwing the three persons into the water. Burke retained his position in the weather rigging, having fallen asleep from exhaustion, and was thus found by the life-saving crew on Monday. The body of Mrs. Pardy washed ashore at Put-in-Bay Sunday noon.

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The small fishing cruiser which is being built at Ashtabula for the Ohio Fish and Game Commission is rapidly nearing completion. She will be completed some time in May. The calking is now being done.

## BUFFALO.

The strike at the Northern Line dock has been settled and the freight handlers are again at work.

There is no adequate tug service at this port, on account of the strike against the Great Lakes Towing Co.

On account of the scarcity of freight the steamer Auburn, of the Western Transit line, is laid up. The Vanderbilt and Montana, of the same line, have not yet been put in service.

Capt. John Byrne, for several years master of the steamer Owego, of the Union Steamboat Line, died on Tuesday afternoon, after an illness of two months. He is survived by a widow and daughter.

The steering gear of the new steamer Nottingham became disabled while the vessel was on her maiden trip from here to Toledo, to load coal, and she was towed into port. It is also reported that the boilers are badly damaged, and will require large repairs.

Acting upon orders from Cleveland all tugs of the Great Lakes fleet stationed here, on Tuesday were laid up in the Dakota slip. A policeman and two watchmen are guarding the boats, and local manager Vrooman, the chief engineer will do the necessary work on board.

The 400-foot steel cargo steamer William Nottingham, built here last winter for the United States Transportation Co., got away on Monday on her maiden trip up the lakes. The vessel cleared for Duluth without a cargo. C. D. Woodard is master of the Nottingham. Capt. W. W. Brown, Cleveland, is managing owner.

The Northern Steamship Co. has no intention of taking its boats out of the package freight trade. The reports that such a deal was contemplated have been going the rounds so frequently of late and have had such an effect upon the business of the company that it now requires and is given official contradiction.

The following meteorological observations are furnished by the office of the U. S. Weather Bureau, Buffalo, for the week ending April 30th. Prevailing wind direction for the week, west; highest velocity, 66 miles, from the west on the 26th; mean temperature for the week, 46, highest temperature, 69 on the 28th; lowest, 35 on the 25th.

Owing to the storm, the tug placed near the wreck of the tug Acme has been taken away and will not be replaced. The wreck is now marked by a buoy and a flag, and vessels leaving port are directed to steer southwest by south for a distance of four miles from the breakwater light in order to avoid it. It is assumed that the course is magnetic.

Cleveland, Chicago and Buffalo, the three leading lake ports, are still tied up by the tug strike, and the officials of the Great Lakes Towing Co. have not made a move to fill the strikers' places. At Duluth, where the members of the Licensed Tugmen's Protective Association agreed to work with non-union firemen, the trouble is practically over, as the company has nine tugs in service at that port.

Capt. M. M. Drake will continue the Buffalo and Green Bay line this season, but will not use the steamer Cuba, which has been chartered for the season to Chicago parties. He has an eye on another steamer, and will keep the Russia in the line as before. He says that the business is not very satisfactory and does not grow. The difficulty is in the east bound rate, which is uniform with Chicago. The west bound business is better, and with the passenger business added makes a profit possible.

Eugene B. Marquette, of Milwaukee, has been appointed master of the tender Hyacinth, now in course of construction for the light-house district under the charge of Major J. G. Warren. In addition to Capt. Marquette Frank A. Dority, of Milwaukee, Charles D. Mason, of Gladston, Mich.; George Y. Dayton, of Cleveland, and Elmer E. Slyfield, of Frankfort, were candidates for the position. Capt. Marquette is about forty years old, and has commanded various vessels on the Great Lakes for ten years. His average in the examination for the post was 97.5.

Buffalo lumbermen are trying to resist the action of the underwriters in defining the height of deck loads. A meeting was held this week, and a protest against the rule was sent out in the form of a resolution in which it is stated that they are unable to control the captains and do not want to run the risk of invalidating their insurance on that account. They propose that additional insurance be levied on excessive deck loads and the vessel be made to pay it. This, of course, combines both the vessel and the insurance against them. Barge owners say that they will not stand any such charge, and the insurance men have held a meeting and decided to resist the demand. They have merely defined seaworthiness, they say, and the lumbermen can bind the captain by putting a clause in the bill of lading. It is expected that there will be a joint meeting on the matter.

The proposition now before Congress to pension men in the life-saving service at rates equivalent to those paid privates in the army and seamen in the navy, commends itself favorably to all who have any acquaintance with the vigilant pickets along the shores overlooking oceans and lakes. The surprising fact is, that such a provision was not made long before this, in view of the hazardous services required, and the moderate salaries paid. Much interest has been aroused in this matter, among those who are familiar with the daring heroism displayed by the crew of one of the stations on the Atlantic coast, a few months ago, when a number of the brave men gave up their lives in a vain attempt to save some perishing seamen, at which time families were left desolate and in want when the government aid ought to have been forthcoming seeing that it was in government service that their bread-winners had been taken away.

The opening of the Erie canal has but little effect in freights but the rate of 3⅝ cents on corn is good and the boatmen are much encouraged. The roads are as yet taking all the wheat, but as there is complaint of car shortage again, there seems to be little chance of the roads cutting rates to secure business. The lumber rate of $2 to New York is higher than the average and will be satisfactory if it can be held. The Buffalo boatmen say that the company that has options on most of their boats is going ahead again, and that they have more confidence in their success than at first, as it has considerable new capital and influence in it now. ~~Such a thing~~ as a canalboat trust was impossible while the law prohibiting a combination of capital in canalboats in excess of $50,000 was in force. This law has now been repealed, and at the present time there appears to be nothing in the way of a successful carrying out of the plans. Such a trust was the dream of Erastus Wiman, who sought to get the law repealed and to form a combination of the boating business. Options have been secured, it is understood, upon most of the boats and steamers doing business along the canal. Many boats owned by the Buffalo & Rochester Transit Co., and the Rochester & Syracuse Steamboat Co., are, it is understood, to be turned into the trust, and it is further planned to extend operations farther down the line, to take in all the business done between New York and Buffalo.

## DULUTH-SUPERIOR.

Some of the lumber carriers now in port are taking ore cargoes on account of the strike of the lumber loaders. Other boats are loading lumber cargoes as well as they can with their own crews.

The tugs are now working here smoothly and the tug company says it could supply other ports with firemen if necessary. An average of forty a day are being turned away for want of employment.

The barge Aurora was released and brought into port on Wednesday afternoon, and was taken to the dock to unload her coal cargo. The steamer Lindsay is now lightering the cargo of the Tampa, and it is expected she will be floated in a day or two.

The Lake Michigan & Lake Superior Line paid the 60 cent scale demanded by longshoremen for loading lumber. Twenty vessels now in the harbor have refused to pay the advance, and are being loaded by their own crews. Of course the line boat had to leave on schedule time.

The lumber shovers at Duluth struck on Monday for an advance from 50 cents to 60 cents per hour for loading vessels, which owners decline to pay. The rate was 60 cents the season before last, but dropped to 50 cents last year. About sixteen lumber carriers are in port, and some of them are being loaded by their crews with what outside assistance can be found.

The indications are that the demands of the lumber loaders for an increase in wages from 50 cents to 60 cents an hour will meet with serious opposition from vesselmen. Word received from other Lake Superior ports indicate that the men are thoroughly set upon having what they ask, and there is little prospect of the proposition being voted down. They hold that the cost of living and all necessaries of life have advanced while there has been no corresponding advance in wages. They contend that the price of lumber warrants an increase in their pay, and as it is to be a big season the trade can easily stand it.

The steamer Tampa and schooner Aurora, coal laden, went ashore twenty miles from here on Tuesday. The tug Zenith, with a wrecking outfit, was sent at once to the scene. The boats are lying on a rocky shore. There was no wind when they stranded, but heavy fog prevailed. Four years ago the Tampa was wrecked in almost the same spot where she is now in trouble. The steamer Tampa is out five feet forward for two-thirds of her length. The Aurora is out 18 inches. The forefoot of the Tampa is badly injured, but a complete examination of the condition of the two boats has not yet been made. The steamer A. G. Lindsay has been chartered to lighter the coal cargoes of the stranded boats.

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Arrest of Vessel in Bad Faith.—The charterer of a ship for two voyages, the hire to be paid by the month, on the completion of the vessel's discharge after the second voyage, and before her actual re-delivery, caused her arrest on a libel filed against her asserting a claim against the owner. At the time the charterer was concededly indebted to the owner for hire under the charter in a sum exceeding that claimed in his libel. Held, that the arrest was made in bad faith, and by an abuse of the process of the court, and that the charterer would be held to the payment of hire under the charter to the time when the vessel was released from such arrest. Gow et al. vs. William W. Brauer S. S. Co., 113 Fed. Rep. (U S.) 672.

## CHICAGO.

The C. S. Parnell was released from the crown of Washington street tunnel on Friday. The Parnell grounded on the Sunday previous.

The steel steamer Luzón, 3,582 gross and 2,778 net tons, built at the South Chicago yards of the American Ship Building Co., and hailing from Cleveland, has been granted official numbers by the Bureau of Navigation, Treasury Department.

Not a move has been made to-day to start up the tugs of the Great Lakes Towing Co. either here or at South Chicago. The local officials of the tug trust declined to discuss their probable action, as they said it all depended upon orders from Cleveland.

Grand President Valiquet told the independent tug owners that the Deck Hands' and Firemen's union would no longer object to the towing of sailing vessels in the river by their boats, but that no line or vessels owned by the steel trust or by lumber companies contracting with the tug trust could be handled.

The following meteorological observations are furnished by the office of the U. S. Weather Bureau, Chicago, for the week ending April 30th. Pravailing wind direction for the week, west; highest velocity 70 miles from the southwest on the 25th. Mean temperature for the week, 53; highest temperature 71, on the 29th; lowest 40, on the 27th.

On Saturday next it is expected the new steamer building by the American Ship Building Co. at their South Chicago yards, for the Western Transit Co., will be launched. She will be christened the Milwaukee. The new steamer is a sister ship to the Chicago, recently built here, except that she has triple expansion engines instead of quadruple expansion.

After reaching a velocity of 72 miles an hour in the squalls the recent gale dropped to about 48 miles an hour on Monday last. The gale was as dangerous to shipping as any in recent years and the only reason marine men said that the list of wrecks on the Great Lakes was not longer than it has been was due to ample warning given by the Weather Bureau in its storm signals, which were hoisted many hours before the storm broke in its fury.

According to instruction from the general offices of the tug trust at Cleveland, Manager Sinclair laid off the captains and engineers of the Chicago fleet in order to reduce the running expenses to the minimum during the continuance of the strike. Grand President Charles McCarle, of the Licensed Tugmen's Protective Association announced on Monday that that organization would take no general action to support the strike of the deckhands and firemen at present and would remain neutral. Several schooners which arrived during the day were forced to remain at the piers, as the independent tugs refuse to tow vessels having season towing contracts with the trust.

A largely attended meeting of the board of managers of the Lumber Carriers' Association was held at the Chamber of Commerce building, on Wednesday. It was unanimously decided to pay no more than fifty cents an hour for loading lumber. The members were determined in their stand that fifty cents is all that can be paid under existing circumstances. About 100 telegrams were received by the board from lumber and vessel owners, also from mill owners at Duluth and Ashland. Many boats are now at Duluth partly loaded and others waiting will lay up rather than pay more. Rates outside of Duluth remain unchanged. A joint meeting of the board of managers and mill owners will be held at Duluth on Thursday evening.

Grand President Archie Valiquet, of the firemen and deckhands' union, which is conducting the strike against the Great Lakes Towing Co., yesterday made the first statement for the strikers on the progress of the struggle. He says the trust's fleets at Cleveland, Buffalo, Chicago, Ashtabula, Lorain, Fairport, Sault Ste. Marie, Ashland, Tonawanda, and Erie are tied up tight. He concedes the trust's claim that eight tugs are running at Duluth, and four at Toledo. He says also that the trust has one tug each working at Sandusky, Marquette, and Escanaba. Port Huron he gives to the trust unconditionally, as the firemen and deck hands are not organized there. All work at the "Soo," he says, is being done by two government tugs.

The steamer Charles H. Hackley, of the Barry Muskegon line, which formerly was the Hartford, an ocean liner, and later the hospital ship Terry during the Spanish-American war, last night began her summer's operations between Muskegon, Grand Haven and Chicago. Considerable interest attaches to the steamer from the fact that it is the vessel Miss Gould selected as the one she should outfit for its duty as a hospital ship three years ago. Since Miles Barry bought the boat from the government last year $40,000 has been spent in remodeling her for lake service. In re-naming the vessel the owners christened her for a well known Muskegon millionaire philanthropist. Two thousand passengers may be accommodated on the Hackley, which has 240 state rooms. The ship is 243 feet long and of 40 foot beam.

Marine Iron Works, Chicago, manufacturers of marine machinery, has on its books orders from the Tabasco-Chiapas Trading & Transportation Co., which does an extensive busness in the tropics, for a large amount of machinery; complete stern paddle wheel steamboat work for Zaragoza Mining Co., of United States of Colombia; a pair of 9x36 stern paddle wheel engines for Central America; set of 12 24x72 horizontal tandem compound stern paddle wheel marine engines; steel steamer fitted out all complete for waters tributary to Gulf of Mexico; 80-foot steam yacht for St. Lawrence river. Other foreign countries represented by orders are Turkey, Brazil, Guatemala, Bolivia, Mexico, Ecuador and Canada. The new plant of this company is equipped with electrically-driven power throughout, and nearly all its machinery is new and of modern design.

Five independent tugs operating on the Chicago river in general towing during the continuance of the strike, against the Great Lakes Towing Co. have been merged and are practically from one office under the direction of Manager William Harmon, of the Chicago Towing Co. The merger has been effected since the opening of the strike here, and may be continued even after a settlement between the tug trust and its striking employes. By the merger one company now controls all the general towing at this port. The tugs thus being operated in harmony are the Dunham, Leslie, May, Bradwell, and Success. With them, when not engaged in work for the city, the tug James Hay operates. At South Chicago the tugTom Brown, owned by the Chicago Towing Co., but under charter to a contracting firm, is doing towing whenever vessels are in danger.

The board of managers of the Lumber Carriers' Association of the Great Lakes held a meeting at the offices of the Lumbermen's Association in this city on Tuesday for the purpose of deciding what course should be taken in dealing with the lumber loaders who have struck for 60 cents an hour at Lake Superior ports. It was unanimously decided not to pay the men more than 50 cents. The meeting was large, President F. W. Gilchrist, of Alpena, Mich., presiding. Nearly all the other officers of the organization were present and fully 100 telegrams from mill owners and vesselmen all over the lakes, requesting that the old rate for loading be strictly adhered to, were read. After deciding this point the meeting was adjourned to be held at Duluth Thursday, when the mill men will be taken into joint conference and an ultimatum to the effect that the advance asked by the 'longshoremen will not be granted will be issued.

The order of the harbormaster of the port of Chicago, prohibiting vessels drawing more than sixteen feet of water from entering the south branch of the Chicago river, will practically amount to excluding boats engaged in the coal and grain carrying trade, because they are nearly all large vessels of greater depth. Several members of the Chicago River Improvement Society visited the Drainage Board to enter their protest against the danger to ther interests by city council and board not taking some decided action to have the tunnels lowered or removed entirely—the latter would be preferred. The Drainage Board can afford temporary relief by closing the gates of the canal at Lockport, though in some instances that is insufficient. One member said: "The order of the harbormaster will rule out all coal and grain traffic from the south branch. We have suffered seriously since the water was turned into the channel in 1900, and if boats drawing over sixteen and a half feet are prohibited from entering the south branch, we might as well close our docks and stop business." Another told the Drainage Board: "As far as we are concerned we can't get boats to our south branch elevators now and for all practical purposes they are useless to us. There are millions of dollars' worth of improvements along the south branch and there would be more if the tunnels were removed. In the meantime the tugmen's strike has placed an embargo on the port so that a great volume of traffic is at a standstill.

## CLEVELAND.

Mr. A. W. Horton, of the Pittsburg Coal Co., has secured another vessel which will be fitted up for a fuel lighter at this port.

At a meeting of the directors of the Cleveland & Buffalo Transit Co. the regular quarterly dividend of 1¼ per cent. payable May 1, was declared.

The Bureau of Navigation, Treasury Department, has granted official numbers to the cargo steamer Steel King, built at Lorain and hailing from this port. Her tonnage is 4,308 gross and 3,366 net tons.

Capt. William Cumming, who was appointed master of the steamer William F. Fitch, has decided to remain ashore. Capt. A. J. Greenley has resigned as master of the steamer Rensselaer, of the trust fleet, to take the Fitch.

The H. D. Coffinberry, which acted as a tug for the severed sections of the Minnetonka, has gone up the lakes with a cargo. She will have another job on her return trip to take the Minnewaska, sister ship of the Minnetonka, to Port Colborne.

During last Saturday's gale the schooner Grace G. Gribble, of Cleveland, Capt. Thomas Wilson, went to pieces on Point Pelee, and three of the crew were drowned, three others saving themselves. The lost are: Levi Fuller, sailor, Port Hope, Mich.; College Bendixon, sailor, Portage, Wis.; William Roach, mate, Cleveland. Those who saved themselves are: Capt. Thomas Wilson, No. 39 Ravine street, Cleveland; Fred Campbell, and William Barber. The Grace G. Gribble, which registered 300 tons, left Ashtabula Thursday night with coal for St. Ignace. The Gribble carried away her canvas in a squall, lost her anchors and drove ashore at Point Pelee. She was built in 1873, was still on her first letter and rated for insurance purposes at $2,500, owned by H. G. Beck and others.

The Cleveland and Buffalo boat line and the Lake Shore railroad have entered into an agreement whereby tickets on the Lake Shore in either direction are good between Buffalo and Cleveland on the boats without extra charge. Eastbound passengers can make train connections at Buffalo and westbound passengers at Cleveland.

A number of masters are beginning to find out that they don't require as much tug service as formerly, and are moving their boats something after the style of the old schooner days, by hauling and warping with a kick ahead or astern of the propeller now and again. Time is, of course, everything, but from the present experience it looks as if tug boat bills would be cut down in the future.

The following meteorological observations are furnished by the office of the U. S. Weather Bureau, for the week ending April 30th. Prevailing wind direction, west; highest velocity 50 miles, from southwest on the 26th; mean temperature for the week, 53; highest temperature 72 on the 26th; lowest, 35 on the 24th. Sunrise and sunset data computed for local time; May 2nd, sun rises 4:55; sets, 7; May 5th sun rises, 4:51, sets 7:03; May 8th, sun rises 4:47, sets 7:05.

The "Long-Arm" System Co., of Cleveland, makers of power doors and hatch gear, have issued a bulletin showing that some 250 of their power doors have been installed or are being completed in such ships of the navy as the Maine, Missouri, Arkansas, Wyoming, Nevada, Florida, Chicago, Denver and others. These doors are practically sliding gate-valves, operated by power, which may be operated independently by power or hand, or controlled simultaneously from one emergency station.

The steamers Cartagena and Nicaragua are at Ashtabula to release the schoner Pretoria without lightering. Heavy seas prevented any work on Wednesday. Capt. C. L. Davis, of Milwaukee, representing the underwriters who have the insurance on the Pretoria's cargo, is in attendance. Capt. James Davidson, who is superintending wrecking operations on the stranded schooner, has been made defendant in a lawsuit begun by Max Kahne, asking $2,000 for damages alleged to have been sustained by Kahne's brick block at Ashtabula harbor. It is claimed that one of Davidson's boats the Venezuela, bumped into the block while entering port on July 28 last.

Cleveland is tied up as tight as ever by the tug strike and the outlook for an early settlement of the trouble is not bright. The members of the Licensed Tugmen's Association at this port and Lorain have been out four weeks, and the men and the officials of the Great Lakes Towing Co. are further apart now than when the strike was ordered. In addition to their original demands to have every other night and every other Sunday off, the men have decided to demand an increase of 10 per cent. in wages to make up for the time they have lost. The officials of the company have not shifted from the stand they took at the start and it looks like a fight.

For the last few days stories have been going the rounds of another boat race during the coming summer. Just what boats were to participate was not specified, but the talk seemed to be that the Northern Steamship Co. wanted to race the City of Erie with one of its new boats. This, however had no foundation, and it is now learned that Commodore Gardner innocently started the report by his allusion to the Erie-Tashmoo race of last year. He spoke of it in the East, and said that if the Parkers want another race they can get it. Mr. Newman, of the C. & B. line, says he knows of no race in prospect, but he is as game as ever, and intimates that the City of Erie is still the fastest boat on fresh water. The Parkers are considered as satisfied with the result of last year's race, and will hardly desire another test.

Among the old files at the custom house three old vessel clearances from foreign ports to Cleveland were discovered. The Leader man says: "The first was dated at Liverpool, Eng., October 8, 1849. It was a clearance for the schooner California, which brought to this city 1,497 tons of railway iron among other things. Five days later the brig W. Taylor started with two horses as her only cargo. The most interesting paper is that reporting the clearance of the schooner John F. Warner from Liverpool, July 27, 1860. The boat was in charge of Capt. A. R. Manning. The cargo consisted of 200 tons of salt and 100 tons of pig iron. The schooner Warner was built here five years previously and is still in service on the Great Lakes. She is now a tow barge in the lumber trade Capt. Manning has long since given up a marine career, and is engaged in the insurance business in the Atwater building." There is an error about that California's cargo somewhere, as 1,500 tons was never carried through the old Welland canal. I also doubt the two horse story, but the Capt. Manning item is all right and he does not look a day older in the last dozen years, though regularly attending to business.

## CONTRACT RIGHTS OF SEAMEN.

(CONTINUED FROM LAST WEEK.)

This attempted enlargement of a seaman's liability originated in the curious confusion of the adjective qualities of an offense with the substantive name of it. Manslaughter is an "offense committeed in breach of a statute for the government" of all persons, including those in the navy. Yet the modest Navy Department of 1881 refused to try William Brown, coal heaver, U. S. N., for killing, on the U. S. S. Minnesota, a "fireman U. S. N." until Attorney General Devens had assured it that a naval violation of § 5341 R. S., while triable by the civil courts, had better be tried by court-martial since it "affects directly the discipline of the service," is "injurious to the order and discipline of the navy," and "jurisdiction is given" by Art. 22 over such manslaughter "for the purpose of preserving that order and discipline." These adjective phrases are now substantive charges. Yet the charge against coal heaver Brown in 1881, resulting from Mr. Devens' opinion was not "conduct to the prejudice" etc., but "manslaughter, in violation of the 22nd article for the government of the navy."

The day of so classic a charge has gone by. From the encouraging phrases of Mr. Devens as a starting point the meandering Navy Department, under the influence of its J. A. G., has come to regard itself as a sort of deputy congress. It now amends acts of Congress at will. "Selling clothes," for example, is a penitentiary offense. Navy Reg. of 1900, p. 491. The court martial does not entertain the question whether the "selling" was the disobedience of a lawful order or a statute. If the mere statement of such a *reductio ad absurdum* is not sufficiently conclusive, here is one more:

Persons in the army and navy are required by Congress to be taught by "articles" publicly read to them at stated intervals (Art. 20, cl. 10 § 1624 R. S.) that in this Republic the army and navy are never to be used to subvert the laws, to enslave a free people, or to enthrone despotism; that only disobedience of "lawful" orders is punishable by court-martial, and that even disrespectful protests are illegal only when against a superior engaged "in the execution of his office," not in seduction, accepting bribes or other violation of the laws. In support of this principle both the code which Congress prescribed (Sec. 1547 R. S.) should be the regulations of the navy (116 U. S. 180, 181), and the U. S. Supreme Court, hold that the only disobedience and disrespect which can be charged before, and punished by, a court martial, is "Disobedience of the *lawful* orders of his *superior* officer" and "Disrespect to his superior officer *while in the execution of his office.*" Even the present Navy Reg. (1900) are compelled to admit this, pp. 486, 488 and p. 458, Art. 1840 (3, 6, 7); "Forms of Procedure," Laucheimer, pp. 50, 44. In the U. S. Supreme Court's latest decision on court-martial law (Carter vs. McClaughry, 183 U. S., 394) the jurisdiction of a court-martial over a charge is held to depend on the question whether "the charges describe each offense in the language of the article." It is this phraseology which the illiterate soldier or sailor hears read over to him, by command of statute, at formal musters; it is this to which he contracts allegiance; and on this, the terms of his contract, his sentence should rest, or nowhere. Military trials on the high seas or the battlefield, must often take place unhelped by any lawyer either among the judges or as counsel for the accused. It is necessary to the justice of their judgments to have the short, simple, naked "charge"—put in bold relief at the head of the account of the accused's supposed misbehavior—point out to unprofessional, hurried or careless eyes, and to perhaps half tipsy minds, just what elements the alleged misconduct must possess to be punishable by the statute which the military tribunal has sworn to observe (Art. 40). A glance at the naval articles will discover that omitting a qualifying phrase might lead a court-martial to impose punishment on an assertion of conduct which had a reprehensible sound but an innocent sense. Thus, in 1865, a court-martial found Commodore Craven guilty of "failing to do his utmost to overtake and capture or destroy a vessel." This conduct was not punishable in justice or law unless it was modified by "which it was his duty to encounter;" Art. 4, (19) § 1624 R. S.; and the sentence thereon was "set aside." G. O. 68, Dec. 6, 1865. In the War Department's G. O. 104, Army of the Potomac, 1862, of a charge that did "not speak of the deceased being 'in the execution of his office' when killed" it was held, "For a soldier, or an officer, to kill his superior, is not a capital crime by the articles of war, unless that superior be 'in the execution of his office.' Mere murder is not a military offense. The sentence of death pronounced by the court-martial is a nullity." The propriety and necessity for these military and Supreme Court rulings may be shown by a forceful illustration. Suppose a U. S. soldier or seaman tried on the charge of mere "disobedience of orders," with the specification, "refusing to arrest members of Congress while in session at the capitol." The court-martial has been told in Carter vs. McClaughry, 183 U. S. 394: "Whether the specifications support the charges we are not at liberty to consider. A court-martial has jurisdiction to determine whether the accused is guilty of any of the *offenses created by the articles of war.*" Thus it is solely for the court-martial to determine whether a refusal to imprison and annihilate Congress is disobedience. If the only remaining question for the military tribunal to decide is merely whether it is "disobedience of orders" of some one, then Congress has abdicated its right to exist. (G. O. 68 A. and I. G. O. Richmond, Va., 1863; G. O. 21, Northern Dept. 1864; G. O. 156, War Dept. A. G. O. 1863.)

GEORGE F. ORMSBY.

## ACTION OF SEA WATER ON CONCRETE.

At a recent congress on the testing of materials of construction, held at Budapest, M. Le Chatelier contributed an interesting paper on the destruction of Portland cement by the action of sea water. According to M. Le Chatelier the constituents of cement most subject to attack by sea water are compounds of aluminium. Between the magnesium sulphate dissolved in sea water and the lime of the cement there is a reaction which produces calcium sulphate, and the action of calcium sulphate on the calcium aluminate of the cement initiates decomposition. This decomposition comes about by the swelling of the sulpho-aluminate of lime produced by the reaction between the sulphates and aluminates of calcium, the disintegration being most rapid where the quantity of alumina in the cement is greatest. With cements containing only one to two per cent. of alumina the action is very slight, or perhaps unnoticeable, while with cement containing 7 or 8 per cent. of alumina the disintegration is rapid.

With a view to produce a mortar more stable in sea water, M. Le Chatelier has investigated the effect of replacing the alumina by other oxides not reacting with calcium sulphate. The substitutes tried have included oxides of iron, cobalt, chromium and magnesium. The cements were prepared by bringing up the mixed ingredients to a temperature of incipient fusion, and then grinding the clinker thus produced. The cements on grinding were gaged wth water, and the test pieces on moulding were allowed to harden under water. The stability of these cements in the presence of Ca2 So4 was much superior to that of cements containing A1 2 O3, the best results being got when Fe2 O3 was the substitute used. Such a cement having a composition equivalent to 5 Si O2, Fe2 O3 17 CaO, was found to be not only very stable chemically, but to have at the same time excellent mechanical properties.

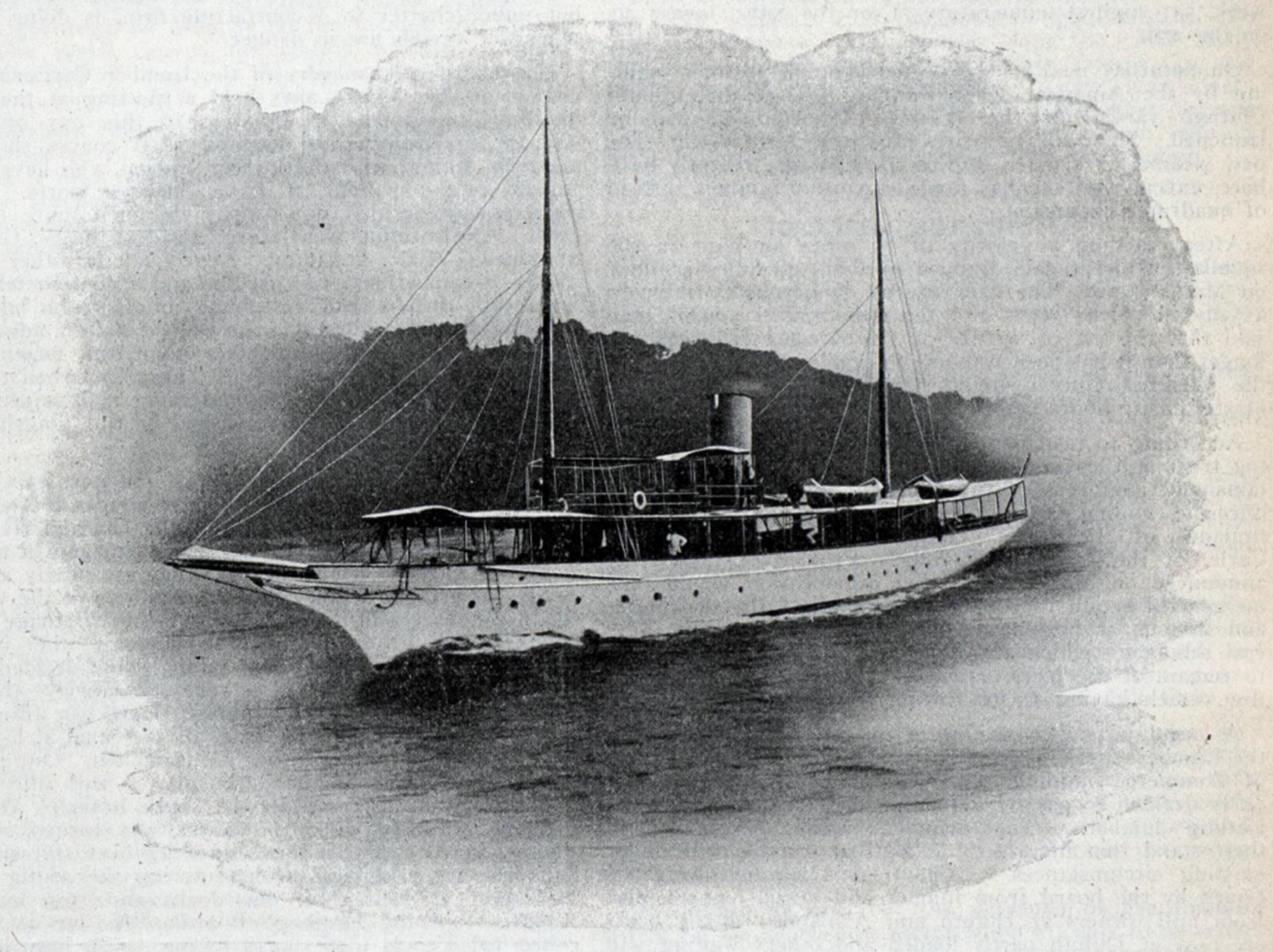
M. Le Chatelier has further observed that cements having but small percentages of lime are less attacked than those with more lime, and an equal percentage of A1 2 O3, and that addition of puzzolana does much to mitigate the chemical action of the sea water. The resistance of cements to the sea is, however, not altogether a matter of chemical composition, but is dependent also upon the physical characteristics of the concrete; a dense close-grained concrete resisting much better than many porous ones, of better composition from a chemical point of view.

## MORGAN'S SHIPPING DEAL.

There is no class of news printed in the newspapers that is oftener subject to revision, revisal and final rejection, than the so-called news affecting steamship interests. Even the big newspapers in the seaboard cities fall off the dock when they undertake to chronicle the affairs of either the foreign-going or coastwise lines. They put side-wheels on a screw-propeller and record a 'longshoremen's strike and a tie-up of shipping in Switzerland.

At the same time there is a likelihood that the reported combination of trans-Atlantic lines by Mr. Morgan may be correct. It would seem to be a natural evolution as well as a commercial necessity. The maritime interests of the United States have been our one weak spot as a nation. It seems incredible that any interest so important to the prosperity of the whole as the shipping interest undeniably is, should have been permitted to fall to its present low estate. The American flag has come to be a rare sight on the high seas. If it were not for the coastwise and lake shipping the maritime interests of the United States would be practically nil.

The result is that we are paying something like $200,000,000 a year to foreign ship owners for carrying our goods to market This money, or a large part of it, ought to go into American pockets. It would go into American pockets if we had the ships in the foreign trade.



TWIN-SCREW STEEL STEAM YACHT "IRENE," SPEED 18 MILES AN HOUR.

Built last year by Gas Engine & Power Co. and Charles L. Seabury & C., Con. Morris Heights, N. Y. The machinery consists of two, Seabury triple-expansion engines, and a Seabury water-tube boiler. There are also an auxiliary blower, circulating and electric lighting plant. dynamo and storage batteries, and search light; steam steering gear and windlass, and steam heaters. Coal bunker capacity twenty-two tons Length over all, 155 feet. Beam, extreme, 18 feet. Draught, 7 feet, 6 inches.

The enterprise attributed to Mr. Morgan contemplates the bringing of foreign lines under American control and operating, of course, in the interest of American commerce. It might be considered better for American shipyards and American industry to build ships to accomplish this end. The building of great ocean steamships is a slow process. Besides, the dullness that has been hanging over shipping interests suggests the wisdom of utilizing ships already afloat rather than the building of others for which cargoes might be wanting. Mr. Morgan's plan would seem to be dicated by sound business sense.

The West has a larger interest in the shipping question that it has given to it. The policy of many Western congressmen to oppose every proposition looking to the aid of American shipping, because it was shipping and not something relating directly to the farm, the range, the mine or the mill, has been a short-sighted policy. We might as well oppose the bulding of a railroad into a mining district like Butte or into some agricultural region which we hoped to develop, as for Westerners to oppose the progress of American shipping. Every farmer and stockman—a trinity that furnishes the bulk of our exports—have a direct interest in and will benefit by the expansion of our merchant marine in the foreign trade. Looking at this subject from the proper standpoint, no deep philosophy is required to penetrate it.

If Mr. Morgan has succeeded in rounding up a lot of foreign shipping to be operated in the interest of American commerce, he has done a good thing for the country.—The Inter-Mountain, Butte, Mont.

## LAUNCH OF THE STEAMER W. C. RICHARDSON.

The steel cargo steamer W. C. Richardson was successfully launched from the Cleveland yards of the American Ship Building Co. Saturday afternoon. Notwithstanding a heavy gale of wind was blowing at the time, to which the large hull presented an immense surface, the signal was given promptly at 2:30 p. m. to cut away, and as the craft moved in a line on the ways, Mrs. Tracy Hoyt Paine, daughter of Capt. W. C. Richardson, in honor of whom the steamer was named, gracefully, and with complete composure, broke the customary bottle of wine on the stem, voicing the words, "I christen thee W. C. Richardson" and in the next instant the 400 feet of high class steel construction was waterborne.

The launch of the Richardson seemed to the old hands quite like a society event, a bevy of ladies, young and younger, elegantly dressed, and all handsome in appearance graced the launching stand and American beauty roses were in profusion. Mr. James C. Wallace, general manager of the American Ship Building Co., represented the builders and stood sponsor with the fair christener.

Among those present at the launch we noted Messrs. W. E. Chapman, W. C. Richardson, C. E. Richardson, J. T. Kelley, H. H. Baker, Buffalo; E. D. Carter, Erie; A. B. Wolvin, Duluth; Mr. and Mrs. J. C. Siegel, Miss Florence Siegel, Miss Creys, Mr. and Mrs. W. F. Nick, Miss Louise Nick, Miss Edith Nick and Miss Catherine Nick, Erie; Mr. J. P. Deveny, Mr. and Mrs. W. W. Scott, Ashtabula; Mr. and Mrs. Hugh Ford, Mr. Thomas Prendiville, Chicago; Mr. A. C. Toombes, Mr. Ray Scoville, Mr. P. C. Ford, Mr. Tracy H. Paine, Miss Alice Gordon and Miss Catherine Fitch Haskell, Ashtabula; Mr. E. H. Belcher, Boston; Mr. and Mrs. George Black, Miss Black, Detroit; Mr. and Mrs. Quincy Gilmore, Capt. and Mrs. Thomas Wilford, Lorain; Mr. and Mrs. George Harrison, Glenville; Capt. and Mrs. Thomas Jones, Capt. and Mrs. F. D. Herriman, Mrs. H. W. Herriman Fosmeir, Mrs. H. H. Caniff, Mrs. F. H. Haserot, Mr. and Mrs. Charles Richmond, Mr. and Mrs. C. E. Grover, Mr. George Williams, Miss Rose Heffron, Capt. John Mitchell, Mr. A. C. Saunders, Mr. H. B. Nye, Mr. Edward Williams, Mr. H. C. Ellison, Mr. E. C. Collins, Mr. Silas Hitchcock, Mr. W. W. Hazzard, Messrs. Louis and George Hausheer, Ward, Jackson, Logan, and many other well known local marine men.

The new steamer to be enrolled in the Richardson Transportation Co. is expected to be ready for service in about two weeks. Her general hull dimensions are 374 feet over all, 354 feet keel, 48 feet beam and 28 feet molded depth. She will have triple expansion engines, cylinders 20, 33 and 54 inches, with 40-inch stroke. Steam will be furnished by two Scotch type boilers, 14 feet in diameter and 12 feet long. The Richardson will carry 5,000 tons on eighteen feet and will cost $220,000.

Capt. Thomas Wilford will sail the new steamer with James Falconer as chief engineer and who we understand is one of the best in lake service.

Capt. Wilford has been in the employ of W. C. Richardson since 1880. At that time he was in the schooner Exile. The first steamer that Mr. Richardson had was the John M. Osborne and Capt. Wilford brought her out. He also brought out and sailed the steamer J. H. Devereux, which boat he sailed until the steel steamer J. H. Wade was built, then brought out the Wade and remained master of her until the steel steamer Samuel Mitchell was built, which craft he also brought out and sailed for the last nine years.

## POTATO ALCOHOL AS FUEL FOR MOTORS.

The German government is offering prizes for designs of motors to use alcohol as fuel, and the inducements made public by the War Department for military motor-wagons to use that means of motive power have been mentioned in these columns at a previous time. It is said that Emperor William is much interested in the experiments, as he hopes by such means to make the potato, from which the alcohol is made, as staple and profitable a crop as the beet root. The Emperor's influence is also being exerted to introduce the alcohol motor to the propulsion of small craft, and the Hamburg-American and North German Lloyd companies have agreed to equip a number of their harbor boats with the motors. The Krupp works have ordered an alcohol motor to be installed at Meppen for shifting guns. A perfectly satisfactory alcohol motor does not appear to have been constructed, although the makers are seeking to improve the existing models. Successful tramway motors were exhibited at the Berlin alcohol exhibition held last February.

## GAS BUOYS ON THE PACIFIC.

We take pleasure in quoting from the Marine Journal, New York, the following articles relative to gas buoys:

"It was reported the other day that the light-house tender Manzanita was about to place a Pintsch gas buoy on the bar at the mouth of the Columbia river, Oregon. This was claimed to be the first gas buoy put down on the Pacific coast. This is a mistake, however, as there is another at San Francisco which was ordered by the Light-House Department to take the place of the lightship when it was necessary for her to leave her station off the harbor of San Francisco. It is surprising how far behind the Pacific coast is in the proper illumination of its harbors by this valuable device. There are at the present time about 75 of these buoys on the Great Lakes, and 80 or more along the Atlantic and Gulf coasts, where they are of inestimable value, and in referring to them the best pilots say that they don't see how they ever got along without them. Since their introduction the stranding of vessels in intricate channels at night has become less and less each year, owing to their making the channel perfectly plain for the navigator and their unquestionable reliability."

We may say that the Pintsch system of gas lighted buoys are considered invaluable in the successful piloting and transportation of lake commerce.

## CITY OF CHICAGO VS. CONESTOGA.

In the United States District Court, Chicago, Judge Kohlsaat decided on Monday the Conestoga case wherein the Anchor Line endeavored to collect from the city of Chicago damages amounting to $80,000 from the collision of the steamer Conestoga with the water works crib off Chicago avenue some two years ago. Judge Kohlsaat divided the damages equally between the city of Chicago and the Anchor Line.

He held that the city was at fault for not having proper lights and fog signals on the crib, and the Conestoga was equally at fault for running at too high a rate of speed in the fog. The Fitzsimmons-Connell Co., contractors for the crib, which was made a party to the suit, was absolved from damages on the ground that the work had been turned over to the city and accepted.

The case was of great importance to all cities around the lakes, as it fixed the liability of municipalities for losses from collisions with water works cribs in navigable waters. According to this decision, if cribs are properly lighted and provided with fog signals it is the duty of masters to look out for them.

## THE LONE NAVIGATOR.

It will be remembered that early in October a wedding took place between Capt. Andrews, known as "the lone navigator," and a hospital nurse. Numerous people were present at the ceremony, it having become known that the couple would start at once in a vessel called the Dark Secret on a voyage to Europe, their course being laid direct for the Azores, afterwards to Spain, and later to England and France. The boat was scarcely larger than an ordinary rowing boat, though vastly more seaworthy

The friends of Capt. and Mrs. Andrews firmly believe that the once happy couple will never be seen again, and from all acounts they have good reason to believe that the little boat was wrecked and lost many weeks ago. It was last seen bv a passing schooner about a fortnight after their start, but there have been no signs of it since, except that Capt. Walter Leath, of the schooner Myrtle, reported some weeks after the start having seen a craft such as the Dark Secret bottom upwards.

## STATEMENT OF THE VISIBLE SUPPLY OF GRAIN.

As compiled by George F. Stone, Secretary Chicago Board of Trade Saturday, April 26, 1902.

| CITIES WHERE STORED. | WHEAT. Bushels. | CORN. Bushels. | OATS. Bushels. | RYE. Bushels. | BARLEY Bushels |
|---|---|---|---|---|---|
| Buffalo | 1,721,000 | 458,000 | 456,000 | 321,000 | 499,000 |
| Chicago | 6,567,000 | 4,381,000 | 780,000 | 767,000 | 19,000 |
| Detroit | 126,000 | 51,000 | 1,000 | 30,000 | ..... |
| Duluth | 11,342,000 | 43,000 | 14,000 | 286,000 | 106,000 |
| Fort William, Ont. | 2,761,000 | ..... | ..... | ..... | ..... |
| Milwaukee | 501,000 | 102,000 | 72,000 | 22,000 | 114,000 |
| Port Arthur, Ont. | 225,000 | ..... | ..... | ..... | ..... |
| Toledo | 35,000 | 372,000 | 275,000 | 104,000 | ..... |
| Toronto | 43,000 | ..... | 14,000 | ..... | 15,000 |
| On Canals | 113,000 | 80,000 | 124,000 | 37,000 | 50,000 |
| On Lakes | 1,609,000 | 808,000 | 199,000 | ..... | 12,000 |
| Grand Total | 40 449,000 | 6,888,000 | 3,114,000 | 1,836,000 | 1,132,000 |
| Corresponding Date, 1901 | 48,352,000 | 19,295,000 | 12,364,000 | 970,000 | 696,000 |
| Increase for week | ..... | ..... | 60,000 | ..... | ..... |
| Decrease " " | 3,792,000 | 338,000 | ..... | 7,000 | 233,000 |

**While the stock of grain at lake ports only is here given, the total shows the figure for the entire country except the Pacific Slope.**

Insufficient Lookout.—The ship Reliance was sailing closehauled on the starboard tack at night in the Pacific, when she saw the red light of the schooner Zampa off her port bow at a distance of a mile and a half. The Zampa soon showed both lights, and thereafter her green light only. When the Zampa was quite close, and almost directly ahead, still showing her green light, the officer in command of the Reliance, believing a collision otherwise inevitable, changed his course to port. Immediately afterward the Zampa changed her course to starboard, and a collision resulted. Held, that the Reliance was justified. under the circumstances, in changing her course when she did, and that the fault for the collision must be placed on the Zampa for failing to sooner change her own course so as to avoid the appearance of danger, which apparently resulted from her not keeping a proper lookout, and failing to see the lights of the Reliance until immediately before the collision. The Zampa, 113 Fed. Rep. (U. S.) 541.

## SHIPPING AND MARINE JUDICIAL DECISIONS.

(COLLABORATED SPECIALLY FOR THE MARINE RECORD.)

Improper Anchorage of War Vessel.—Anchoring vessels of the United States in an unusual and improper position in a harbor, in total disregard of the usages and regulations of the port requiring notice to the harbor master of the intention to anchor, constitutes negligence on the part of the officers of the vessel, which will render the United States liable in the court of claims for damages thereby caused to other vessels navigating the harbor. United States, vs. St. Louis & Mississippi Valley Transportation Co., 22 Sup. Ct. Rep. (U. S.) 350.

Anchored Vessels—Dragging Anchor in Storm.—Evidence that the dragging of a vessel's anchor, which resulted in her collision, with another anchored vessel, was due to a sudden and severe squall, does not make out a defense of inevitable accident, where it is further shown that she had out only one of her two anchors, that the squall lasted only about five minutes, and that only one other of a number of vessels at the anchorage grounds dragged anchor, but such evidence, taken together, tends to show that the collision was due to the fault of such vessel in failing to be properly anchored. The Severn, 113 Fed. Rep. (U. S.) 578.

Contributory Negligence of Vessel with Barges.—A vessel with barges in tow is not chargeable with contributory negligence in case of a collsion between war vessel of the United States and some of the barges in tow, when the war vessels anchored in an improper place in a harbor, where vessels were anchored in an improper place in a harbor, where from view by a projecting point of land until the vessel with the tow had come so near that it was impossible to prevent some of the barges from being carried by their headway and by the current into collision with the vessels at anchor. United States, vs. St. Louis & Misssissippi Valley Transportation Co., 22 Sup. Ct., Rep. (U. S.) 350.

Contracts.—A contract between a corporation owning and operating a large fleet of steamers on the Great Lakes. and having its principal place of business in the state of New York, and a firm of coal dealers having yards at Cleveland, Ohio, and Sandwich, Canada, by which the latter agreed to furnish such coal as the company's vessels might need at such ports during the navigation season, construed, and held, in the light of the circumstances, and of similar transactions between the parties in previous years, not to give the dealers liens on the vessels for coal supplied them thereunder. Cuddy et al. vs. Clement et al., 113 Fed. Rep. (U. S.) 454.

Implied Lien.—The rule that an owner of a vessel, who is not also the master, may create an implied lien on her for supplies, is a modern one, confined to the United States, and not a part of the maritime law, and the distinctions and limitations of such rule have never been clearly and fully declared; but the true rule undoubtedly is, with reference to implied liens created by the owner, as well as to express liens created by him in the form of bottomry or respondentia, that there must be a maritime necessity, and this implies both a need of repairs or supplies, and a reasonable impracticability of obtaining the same on the credit of the owner. Cuddy et al. vs. Clement et al., 113 Fed. Rep. U. S.) 454.

Salvage—Allowance.—A tug towed a barge lying at a pier out into the river to save her from danger from burning coal pockets. The barge's cargo was in no danger, and the impending damage would probably not have exceeded $5,000. There was evidence that the barge could have been saved harmless, without the tug's interference, though the tug's services were rendered promptly, and when good judgment warranted them. They involved no peril or suffering to the tug's crew, and, while it was stated that the tug's side was blistered, yet the location of the fire, the protection afforded the tug by the intervening barge, and a failure to prove pecuniary damage, made serious injury improbable. Held, that $300 salvage, apportioned $150 to the tug, $60 to her master, and the balance to the crew in proportion to their wages, was proper. The Barge No. 127, 113 Fed. Rep. (U. S.) 529.

Sufficiency of Evidence—Negligence—Presumption from Accident.—During the year preceding the last voyage of a vessel she leaked so badly that the person in charge of her, rather than bail her, allowed her to sink and to remain sunken until the following spring, when she was raised and less than $100 in repairs put upon her. She was not in commission during the following summer, but floated light, exposed to the sun and wind. Upon her first voyage thereafter she still leaked badly, even before she was loaded, the leakage increased with the load, and upon her return voyage, when only two-thirds loaded, in smooth water with a light wind, she sank. She collided with nothing, and her hull was as sound after she sank as before, except that about six inches of calking was out of a seam above her light water line. Her captain testified that he did not know why she sank, and called the accident a dispensation of God. Held, in an action for the death of the vessels's engineer by drowning, that the evidence was sufficient to justify a finding that she sank because she was unseaworthy. La Fernier vs. Soo River Lighter & Wrecking Co., 89 N. W. Rep. (Mich.) 353.

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CLEVELAND, O., MAY 1, 1902.

RUMORS are prevalent on the Clyde, Scotland, that a new development in the Atlantic trade will necessitate the building of 40,000 tons of new steam shipping.

CARDIFF is entering the lists for consideration as the terminal port on the other side for the fast Canadian mail service. It is said that Cardiff possesses greater advantages than Bristol, Milford, Southampton or Liverpool, as it is a better distributing center.

IN VIEW of the numerous strandings occurring during thick weather, it would be in order to refresh the memory of pilots, and call to mind the value of the always ready and easily used hand lead line. Vessels do not usually ground in less than three fathoms, and in such shoal water bottom could almost be reached with a long pitch pine, pike pole.

THE thanks of the RECORD are due our esteemed patrons John Bliss & Co., 128 Front street, New York, for duplicate copies of their abridgement of the Nautical Almanac for the current year, and the sixtieth year of its publication. Messrs. Bliss & Co. are manufacturers of chronometers, nautical opticians, makers of compasses, adjusters, etc., etc.

REAR Admiral Charles O'Neil has been designated to represent the United States at the Congress of Naval Architects to be held at Dusseldorf early in June. Admiral O'Neil, who has been for the last five years chief of the Bureau of Ordnance and chairman of the board on construction of the Navy Department, is regarded as one of the highest American authorities on warships and their offensive and defensive qualities, his specialty covering armor as well as guns.

THE allegation that it is merely intended to keep the White Star Line steamers under the British ensign for the next few years, while a bill authorizing the American register is meantime passed through Congress, is scouted on the ground that there would be no advantage in such a transfer. It is stated that the whole scheme has been drawn up absolutely without regard to any possibility that navigation subsidies may be paid in the near future by the United States Government. A managing ownership can be exercised by a Britisher even if the majority of the stock of floating property is in the hands of foreigners.

## TO MAINTAIN LAKE LEVELS.

With the failure of the River and Harbor Bill last year, the international commission to consider the maintenance of lake levels also dropped through, as the authority for appointing members from the United States was contained in a clause of the defeated bill.

The measure remained in the River and Harbor Bill which has just passed the House and Senate slightly changed so as to read that "The President is authorized to appoint the United States members of such commission, one of whom shall be an army engineer, one a civil engineer well versed in the hydraulics of the Great Lakes, and one a lawyer of experience in international and riparian law."

It is now well known that many projects are talked of and being more or less exploited all along the lakes, the establishment of which will divert these waters from their natural channels, such, for example, as the Chicago drainage canal and the proposed canal from Georgian Bay to the Ottawa river, not to name many other diversions existing or proposed.

It is understood that this subject has awakened interest in Canada, and that a ready response will probably be given to a proposition for negotiations with reference to the channels affected, and it is believed that agreements can be reached which will solve this problem in a manner for the mutual interest of both countries. This section also contains a provision for an investigation of the desirability of locating a dam at the outlet of Lake Erie.

## WEATHER BUREAU PREDICTIONS.

The utmost credit is due to the Weather Bureau, Department of Agriculture, for the ample warnings sent out in advance of the heavy gale which has just passed over the lakes. In the squalls, hurricane force was reached at seventy-two miles an hour, and but for the timely, repeated and absolutely positive firmness which the Weather Bureau held to the wickedness of the indications, it is safe to say that many more lives and much more property would have been sacrificed.

In this connection we are pleased to quote an editorial from the Buffalo Evening News, printed earlier in the month under the caption of "Well Done, Weather Bureau," and which reads as follows:

"The usefulness of the Weather Bureau had another significant demonstration on Tuesday, when a special bulletin was issued to the marine interests centering here, that a northeasterly gale would prevail and drive the ice in this vicinity up Lake Erie, and make the opening of navigation possible. A large fleet had been held in by the ice, and the accurate information sent out by the Weather Bureau gave them 24 hours to make ready for a start, and they were prepared to take advantage of the opening so announced The result was that 16 vessels left port on Wednesday. The advantage of this information to the commerce of the port of Buffalo was such as to outweigh the entire cost of the signal establshment here for a year.

## CONTRIBUTORY NEGLIGENCE.

The decisions of Judge Kohlsaat, Uuited States District Court, Chicago, are unusually lucid and technically righteous. In the case of the steamer Conestoga vs. City of Chicago, et al., wherein the judgment rendered this week divided the damages between both parties to the suit, the Court showed that legal acumen and entire grasp of the particular case so often proved on other occasions.

There are several important, in fact vital points clearly rendered in the Court's decision, notwithstanding that the entire question could, and has been summed up in the two words conveyed by the judgment, viz "Contributory Negligence"—and therefore an equal division of damages should be assessed.

The steamboat company sued for damages to the amount of $80,000, occasioned by their steamer running into a waterworks crib off Chicago avenue some two years ago, and on the face of the matter it looked as if the Anchor Line, owners of the Conestoga, were duly and equitably entitled to their claim for reimbursement of the sum total of the losses caused by fetching up on or fouling a comparatively unmarked artificial obstruction, placed in the ordinary and usual path of commerce in the fairway or entrance to a prominent lake port.

Although the Secretary of War, under whose jurisdiction is placed the conservancy of all navigable waters, had sanctioned the placing of this miniature artificial island in a well defined position, as he has done in numerous other cases, it was with the proviso that proper lights and fog signals should be established thereon as aids to pilotage and navigation. Such aids not being furnished, the Court ruled that the city of Chicago was delinquent to that extent and therefore liable in part for the damages occasioned thereby. On the other side Judge Kohlsaat very pertinently decided that the Conestoga was equally at fault for running at too high a rate of speed during the prevalence of fog or misty weather, and may we add, that there is no possibility of careening one iota not to speak of capsizing such a positively erudite rendition of the points involved in this particular case.

In touching upon this important feature of "Contributory Negligence" which we desire to impress upon the minds of our readers engaged in the practical handling of tonnage, we are constrained at this time to quote "Steering and Sailing Rules," Art. 27, which reads as follows: "In obeying and construing these rules due regard shall be had to all dangers of navigation and to any special circumstances which may render a departure from the rules necessary in order to avoid immediate danger. Briefly put, this rule means that all laws and regulations may be thrown overboard to keep out of trouble, and this is spoken of as well as understood as being the qualifying clause in the "Rules of the Road." Again, and this applies to the actual conduct, discipline and seamanship in the handling of a vessel, "Art. 28. Nothing in these rules shall exonerate any vessel, or the owner, master or crew thereof, from the consequences of any neglect to carry lights or signals, or of any neglect to keep a proper lookout, or of neglect of any precaution which may be required by the ordinary practice of seamen, or of the special circumstances of the case." This rule is briefly summed up in stating that those in charge of floating property shall act shipshape and be all there when wanted on all occasions, and so that their action or inaction may not lead in any case to "Contributory Negligence."

## WIRELESS TELEGRAPHY.

To the Italian inventor must be awarded the honor and distinction of sending messages to greater distances than other investigators working on different lines in their efforts to accomplish equal results, at the same time it is not improbable that as Marconi advances in his discoveries, other systems may outrank his in the future, if not from a commercial, at least from a national standpoint, or from a land instead of a salt water transmission, and it is well known that several governments are carrying on interesting experiments along these lines.

The United States government has been conducting experiments for some time with devices suggested by its scientific officers. Some of them have had promising results; others have been disappointing. A new series of experiments on the North Carolina coast last week, under the direction of the chief of the Weather Bureau, had the most successful results of anv yet carried out under government auspices in this country. It was established that messages can be sent to vessels at sea for a distance of over 200 miles, and that neither unfavorable seasons nor conditions of weather affect or interfere with the working of the system.

There are, however, conditions which seriously affect the efficacy of the system, and their explanation is yet to be found. Communication becomes imperfect over much shorter distances on land than on water, the experiments that have been carried on for nearly two years failing as yet to overcome the difficulties and irregularities of land transmission. Most puzzling of all is the different effects of salt water and fresh water. The experiments on the islands of the North Carolina coast have demonstrated that the energy required for successful transmission over brackish water is thirty-six times greater than over salt water under the same conditions.

Wireless telegraphy is yet in its infancy, and it will take many years before its possibilities are realized. But already different investigators, working independently, have discovered facts of importance that, when combined, may make the development of wireless telegraphy more rapid than was that of the telegraph or the telephone.

IN THE MARINE RECORD, Vol. XXIV, No. 23, June 6, 1901, we had the following to say anent a Chicago built fleet: "The earlier that capitalists realize that the Welland canal and St. Lawrence system of canals are adapted only for the smaller class of lake tonnage, the fewer the hybrids that lake shipyards will be paid to turn out. If only the least economical type of lake carriers can use the largest canals, how then can such tonnage compete in the Atlantic trade? The Counselman fleet, known as the Northwestern Steamship Co., supposed to be built to form a regular line between Chicago, England and the Continent of Europe, are of the type mentioned. They are not vessels fit to enter the lake trade, are worse than failures as steam canal barges, and abortions so far as Atlantic traffic is concerned, what then, it may be asked, were they built for, and to what use can they eventually be put? Well! so far as we can see, they will only make handy little coasters to trade between shoal water ports. The fact is more pronounced now than ever before in lake history that, special tonnage is required for special trades and combination coaches don't go." This fleet of boats is now being dismantled of their general cargo fittings and being converted into coasters or tankers, to carry oil in bulk from Texas to New England ports.

AND now a college professor, after an accidental voluntary experience, assures us that hanging is an easy way to shuffle off this mortal coil. The professor, who was one day testing for himself what such an experience would be like, lost his footing and was discovered and rescued just as the last faint spark of life was about to leave the body. He declared afterward that he felt no pain, and that the only sensation was that of a fire before his eyes, which finally changed from a bright blue to a black color. He said that he had no fear of the consequences, and that the colors were even a source of extreme pleasure. We most pointedly, strenuously and emphatically resent the professor's arbitrary, contradictory and dictatorial delusion in this matter, and appeal to the shades of the earth's population at the time of the deluge for verification of the beauteousness of the drowning process. Modern testimony corroborates ancient experiences, hence, our protest against the advantages claimed for the newfangled hanging innovation as a means of cheerfully reaching the great beyond.

OWING to the remisness, ignorance, or slackness of duty of the Steamboat Inspection Service, two large wooden vessels are now piled up on the north shore of Lake Superior. It is said the compasses experienced an immediate and mysterious westerly deviation. The steamer Tampa and consort Aurora, coal laden, bound to Duluth, are now in a precarious condition, and their expense account will, no doubt, be very heavy before they are ready to carry cargoes again. The Tampa stranded near the same spot four years ago, and if the local inspectors of steamboats had determined a full and complete report, giving all due publicity to same, it is almost certain that this second casualty would have been avoided. An official inquiry should be held on all serious strandings, with loss of life or otherwise, and the facts made known how or why the vessels were placed in such positions, mere groundings in shoal water due to the rise and fall of lake levels need not be taken into account.

LAKE commerce has been badly handicapped, and later almost brought to a standstill, through a sympathetic strike among the tugmen employed by the Great Lakes Towing Co. The syndicate formerly controled the towing at all prominent lake ports, and gave excellent service to its patrons at a minimum cost, in fact, the returns were too little for the work done. This season the accounts will, no doubt, be on the wrong side of the ledger from the effects of the strike.

BY ALL means pension the worn out heroes of the Life-Saving Service, also adquately protect their widows and orphans. The Government can afford to be liberal to the life savers. It should not only give them wages commensurate with the continuous labor they perform and the great risks they assume, but it should pension them in their old age, and give generous support to the families of those who meet wth death while attempting to succor the imperiled.

THE naval program for 1903, as presented in the naval appropriation bill and accompanying report filed to-day by Chairman Foss, of the House Naval Committee, is one of unusual interest. Among other features of the bill are provisions for a board of naval officers to recommend a site for a naval training station at some point on the Great Lakes; an increase of the enlisted force of the navy by 3,000 men; provisions for a new navy ration, as reported by a naval board; an increase of the number of cadets at the Naval Academy by 500. The detailed statement shows that the appropriation bill carries $77,659,386, which is slightly below the appropriation made last year.

## LAKE FREIGHTS.

The freight market is lifeless and the immediate outlook is anything but promising.

The week opened with the market quiet and a surplus supply of tonnage; ore was placed from the head of the lakes at 75 cents, and the last Escanaba charter is for 55 cents. Line boats, usually in the general cargo, or package freight trade, have been turned into bulk cargo tramp steamers, and one, a Canada-Atlantic boat, was placed at 42½ cents Escanaba to South Chicago, no return cargo; another craft was offered and declined on the same terms, this on account of the slackness in the package freight and grain trade. The coal trade is but little better, the rates holding, however, at 35 cents to the head of the lakes and 40 cents Lake Michigan.

Lumber cargoes are knocked gally west on account of labor demanding 10 cents an hour over former rates or from 50 cents to 60 cents. The freight rate is still steady at $2.50 from Lake Superior ports, with some lumber carrying vessels looking for ore cargoes rather than pay the 10 cent advance on labor for loading. It is a question if 1¾ cents could now be obtained on grain from Duluth, and the Chicago quotation is merely nominal at 1¼ cents on corn to Buffalo. Ore and coal are the only factors in the freight market at present.

## WEATHER BUREAU TALKS THROUGH THE AIR.

Wireless telegraphy tests at Roanoke islands on Sunday last were the most important since the experiments began four days ago. It was a test of an American system of wireless telegraphy. This system has been perfected by Reginald A. Fessenden, working under the direction of Willis L. Moore, chief of the Weather Bureau. These experiments have been going on for two years at intervals, but not until now has it been established beyond a doubt that by the new system wireless messages can be sent to vessels at sea for a distance of over 200 miles.

Fairly good results were obtained several months ago, but Prof. Fessenden did not wish to make the result public or have any tests witnessed by others than government officials until the details of his system were sufficiently developed to prove beyond question that it could be relied upon to work under any and all conditions of weather, at all seasons of the year, night or day. These conditions have now been reached, and Prof. Fessenden invited the representatives of the government to witness his tests. The test was observed by Gen. A. W. Greeley and Capt. Russel of the signal corps of the army, both of whom were very enthusiastic over the results, and by Lieuts. Beech and Hudgins, who were present as representatives of Admiral Bradford, chief of the Bureau of Equipment of the navy.

The government has a station for testing at Weer Point, on the northeast shoals of Roanoke island, and another about seven miles west of Cape Hatteras. The two stations are fifty-three miles apart. The intervening points are on Pimlico Sound, which at this season of the year is fresh and not nearly so good for the transmission of wireless messages as salt water. The tests made by Prof. Fessenden show that the energy required for successful transmission over the brackish water is about thirty-six times greater than over salt water under the same conditions. At each station a mast 145 feet high is erected for carrying of arrival wires, which consist of five copper wires, strung twelve inches apart. The transmitting apparatus consists of the usual induction coils, common with our systems of wireless telegraphy, but the receiving apparatus is altogether different from that used in other systems.

This part of Prof. Fessenden's invention is for the present kept profoundly secret, although the workings were exhibited to the experts present. A telephone receiver is employed, and a remarkable fact is that messages can be sent and received as rapidly as by the land wires, and with far greater rapidity than by cable. Messages were sent at the rate of thirty words per minute, and this is by no means the possible limit. Prof. Fessenden says that with a skilled operator fifty or possibly as many as seventy words can be sent per minute.

The United States naval officers who have been sentenced to imprisonment at Venice, Italy, admit that they were intoxicated when they got into trouble ashore. It is a very costly affair for them, and a bitter disgrace for the navy. Sailors must be sailors just the same, and deep water flat feet usually delight in having a shindy when ashore for a limited time on liberty.

## COAL RECEIPTS AT MILWAUKEE.

The growth of Milwaukee is amply shown by the increase in receipts of coal, a natural and inevitable result of the location there of large factories and manufacturing plants. The following resume of the coal traffic for the last few years by Joseph W. Simpson, will be of general marine interest, partcularly in the assertion that Milwaukee is now ahead of Chicago as a coal distributing point for anthracite. In a talk on coal Mr. Simpson said:

"Just what will be of interest to consumers of coal aside from the price they are compelled to pay, is a hard question to determine. First of all, Milwaukee can claim the distinction of standing first as a coal distributing point for the West, as Milwaukee, as far as hard coal is concerned, is ahead of Chicago. Our railroads allow us to reach all points West and as far as receiving coal is concerned our excellent harbor (which is the best on the Great Lakes), and extensive docks enable us to take care of the largest vessels on the lakes, and give them prompt dispatch at all times. The largest cargo of coal ever received in this city, for example, was brought here by the steamer Henry W. Oliver, with 7,002 tons. This cargo arrived here a year ago last fall, and had no trouble in reaching her dock to unload. Cargoes of 5,000 tons are a common occurrence at this time, while five years ago a cargo of 3,000 tons was seldom received. It is only necessary to tell you that in 1880 Milwaukee received but 370,000 tons, and in 1890 1,000,000 tons to show how Milwaukee is growing as a coal distributing point. It will be interesting to show by the following figures just what the rate of increase is. The receipts by lake for the past eleven years have been as follows:

| | | | |
|---|---|---|---|
| 1891 ..... | 1,006,656 | 1897 ..... | 1,492,292 |
| 1892 ..... | 1,183,119 | 1898 ..... | 1,586,646 |
| 1893 ..... | 1,122,222 | 1899 ..... | 1,767,284 |
| 1894 ..... | 1,217,797 | 1900 ..... | 1,631,008 |
| 1895 ..... | 1,335,942 | 1901 ..... | 1,780,530 |
| 1895 ..... | 1,481,179 | | |

"Judging from the amount on hand at the close of this season, it is safe to say that it will be necessary to bring forward 2,000,000 tons to meet the requirements of the coming season. Practically all the coal used in Milwaukee is received by lake. The anthracite coal which is mined in Pennsylvania is shipped from Buffalo and Erie and the bituminous which is mined in Pennsylvania, West Virginia and Ohio, is shipped from Toledo, Ashtabula and Cleveland. All the docks are now equipped with the latest improved machinery for unloading and loading coal, steam having replaced the use of the horse.

"It is only a question of a few years when all the docks will be handling coal by electricity. In fact, all companies contemplating new docks giving this power serious consideration, and some firms have decided upon its use, and if it is the success expected, it will reduce the cost of handling materially. This is in accord with the progressive age. A greater output and cheaper cost are fast becoming a necessity for a business survival. Thus you see that Milwaukee in this respect is up-to-date. With electricity it will be possible to unload a cargo of 4,000 or 5,000 tons in a single day, while now it takes three or four days to unload a cargo of 2,500 tons. These conditions make it possible for Milwaukee to get every advantage in the lake freights, which is a large item, and on which prices to consumers are based.

## NOTICE TO MARINERS.

BRANCH HYDROGRAPHIC OFFICE,
912 The Arcade,
CLEVELAND, Ohio, April 30, 1902.

Word has been received from Mr. Thomas L. Wilkins, light-keeper of Presque Isle Pier Head Light Station, Lake Erie, that a sand bar has formed to the southward of gas buoy No. 2, and between that buoy and the east end of north channel pier. Boats should keep well to the southward of gas buoy No. 2, before turning to enter the harbor.

GEO. R. CLARK,
Lieutenant Commander U. S. Navy.

THE Republican leaders in the house after a long conference, have decided to shelve the ship subsidy bill recently passed by the Senate. Two propositions looking to this end are under advisement, one to allow the bill to die quietly in the committee on merchant marine and fisheries, where it now is, and the other to report it back with a motion to proceed to its consideration in December next. Even should the bill be reported from the committee, it will be accompanied by so many amendments that it will be impossible to secure action at this session, unless it should be made a party measure. A few Republicans think it would be the wiser plan to dispose of the bill before election, and thus let it be known that the party is opposed to it, but it has been determined otherwise. Speaker Henderson, following the lead of Iowa senators, who voted against it, is opposed to its passage, and it is safe to say that it will not be voted upon at this session.

An English sailor in Singapore was watching a Chinaman who was placing a dish of rice by a grave. "When do you expect your friend to come out and eat that?" the sailor asked. "Same time as your frien' come out to smellie flowers you fellow put," retorted Li.

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## A ST. LAWRENCE RIVER AND GULF SALVAGE TUG.

A powerful twin-screw steel tug and salvage steamer, built to the order of Messrs. George L. Davie & Sons, Quebec, by a South Shields firm, and named the Lord Strathcona, has just made her official trial trip.

The St. Lawrence district has long held the unenviable reputation as being the graveyard of many good ships. Naturally, therefore, it is essential that the waters should be provided with the best of salving gear of every possible description, and, with the advent on the station of the Lord Strathcona, the shipowner and the underwriter may rest assured that everything will be done for a St. Lawrence lame duck which human ingenuity can suggest, backed up by the long and varied experience which the Messrs. Davie enjoy. The Lord Strathcona then, by reason of her design, her construction, and the concentrated thought which she embodies, will unquestionably be well qualified to act her part in the sphere of labor in which she has been called, and this being accepted—which was so expressed by the guests at the trial runs—there is just to be added the hope that she will achieve the same success as her namesake in his career.

The Lord Strathcona is a smart yacht-like vessel of great strength, with powerful engines, and generally fitted up in such a manner as might be expected would be the case of a vessel built for a firm who knew precisely what was wanted, and were able to supply that want. She is built of steel, the plates being exceptionally thick, and seemingly well able to withstand the hard knocks which a vessel engaged in her work is bound to receive.

Briefly, she is a vessel with an exceptionally strong bow, the frames forward being only 12 inches apart, gradually increasing to 18 inches; a double bottom, extending from the forward bunker to the collision bulkhead; electrical equipments for masthead lights, side lights, and for calling the crew and the officers to their stations—by the way, the accommodations for the crew and officers is particularly elaborate, all being placed under the wheel-house, although, of course, on different decks; twin screws, two funnels, and a similar number of masts; tanks for trimming purposes; good bunkerage; a duplicate of many of the more important parts. Her dimensions are: Length, 160 feet by 27 feet by 14 feet 3 inches. Her propelling machinery is of 1,700 i. h. p., and consists of two sets of triple compound engines, each set having cylinders 17in., 28in. and 46in. diameter, by 30in. stroke. Steam is furnished by two large marine type boilers working at 180 pounds pressure. There is direct steam reverse gear, and the fittings are all of the most recent and improved style. The trial was very satisfactory in every respect, and the machinery worked with perfect smoothness and without any hitch. On the measured mile 12½ knots were registered.

Some idea of the Messrs. Davie's operations in salving vessels may best be obtained from the fact that since 1888 to last year no fewer than fifty steamers, besides a number of sailing ships have been successfully dealt with, some of the operations being of a particularly difficult character. The firm also possesses excellent facilities for the execution of repair work, having drydocks, patent slips, and machine shops. They are now in a position to undertake any class of work which may be entrusted to them.

## CENTURY OF BRITISH STEAMSHIPS.

Few centenaries are better deserving of commemoration within the United Kingdom than the centenary of steam navigation. And it was just in the close of March, 1802 that the Charlotte Dundas, the first steamer ever employed for practical purposes, began to tow barges on the Forth and Clyde canal. Steam vessels had been tried on Dalswinton Loch with success as early as 1788, but they were not intended for use, only for experiment. There were only one or two dreamers, like William Symington, the engineer of the Charlotte Dundas, and Henry Bell, who built the Comet in 1812, who had any idea that steam navigation could ever be turned to practical use.

The owners of the Clyde and Forth canal promptly took steps to stop the running of the Charlotte Dundas lest her wash should injure the banks of the canal, and it is even on record that James Watt, the true inventor of the steam engine, threatened William Symington with legal penalties if his engine should prove a success. So the first application of steam to the conveyance of cargo by water ended in financial ruin to the man who had invested his all in it.

The first passenger steamer was not much more successful from a financial point of view than the first steam tug. Henry Bell applied for aid to the government of the day in order that his idea that warships could be driven by steam might be practically tested. It was in 1800 when a steam battleship in the hands of Nelson might have done much. But no help came from the government, nor did private capitalists think that there was anything to be made by applying steam to the transport of passenger vessels. So Henry Bell struggled on as best he could, and in 1812 the first passenger steamer appeared in the Clyde. She took her name, Comet, from the great comet of 1811. She proved that steam navigation was possible for passenger boats, but she ruined her owner, who died improverished at Helensburgh, on the Clyde, in 1830.—London Daily Graphic.

It may be remembered that David Bell, principal of the Bell Engine Works, Buffalo, built the first iron steamer on the lakes in 1862. She was named the Merchant.

## EASTERN FREIGHT REPORT.

Messrs. Funch, Edye & Co., New York, report the following condition of eastern freights:

This week's list of figures shows a very limited business and the demand in all directions is restricted. The only branch of chartering that has shown any activity is for timber from the Gulf ports, and there are further orders in the market for tonnage at prevailing rates. Grain business is still impracticable, owing to the disparity between the buyers and shippers ideas. The cotton season has practically closed, and charterers do not show any indication of taking tonnage for next season, preferring to wait developments. There is also an absence of inquiry for case oil tonnage to the east, but one or two steamers might be placed for coals for government account for Manila.

The market for sail tonnage has not undergone the slightest change, and the situation remains in the same stagnant condition as for some time past.

Grain rates are quoted at 3 cents to Liverpool or Glasgow, 3½ cents for London, 4 cents for Hull and 5 cents for Bristol, Leith or Newcastle. Coal—Norfolk to Manila, $5 in steam; to Honolulu, $6 in sail.

Messrs Funch, Edye & Co. have removed their offices to Maritime buildings, 8 and 10 Bridge street, New York.

WE ARE in receipt of the fifty-third edition of an illustrated catalogue and price list of hand and power pumps, hydraulic and pumping machinery for all purposes, published by Rumsey & Co., Ltd., manufacturers and hydraulic engineers, Seneca Falls, N. Y. It is a great pleasure to endorse this firm's statement when they say, "Our pumps are well known in every part of the world, and the name Rumsey, Seneca Falls, N. Y., is a guarantee of excellence. We avail ourselves of every improved facility for manufacturing and intend always to maintain for Rumsey pumps the reputation for superiority so universally attested." Ages ago, in the dim and distant past, or at about the time when we had to chew a strand of ropeyarns and drink a pint of Stockholm tar, our introduction was made to the Rumsey manufacture; or, as in nautical parlance it might be termed a Western Ocean monkey or a pea jacket, many a sigh of relief went up when the Rumsey sucked and we guess they have been sucking to good purpose ever since, always new and capable of sucking, kept to that standard and not permitted to get old enough in any way to be fed with a spoon or unduly nursed on shipboard. Rumsey & Co., Seneca Falls, N. Y., are pump makers and their handsomely bound, illustrated catalogue gives a fair idea as to their abilities in this direction.

## THE AULD VENUS A TYPICAL ENGLISH FISHING SMACK.

Seeing the Venus among a half dozen of her kind beating down the Humber, one might not have been impressed with her model—straight-stemmed, rather full-bowed, and wide-sterned, of about sixty feet on deck, fifteen feet beam, and nine feet draft. She was yawl rigged, with jib, fore, main and mizzen for lower sails, and lug topsail to main and mizzen. Her foresail was what would be called a stem staysail by American yachtmen, or what American fishermen call a "jumbo," when it is rigged with a boom. She had a hold in the peak, where were stored sails, gear, anchors, salt, and so on. She had a main hold amidship for fish and ice, and a small little after hold for the water-casks, and odds and ends. Clear aft by the stern was the cabin, where the crew slept and cooked and kept their personal belongings. She had a sliding bowsprit, brick-red sails, and was steered with a tiller whose handle was carved into a many-stranded rope's-end.

An ancient lady was the Venus. It was plainly many years since she had been adorned with a coat of real paint, but of hot coal tar she had many dressings, and she smelled of pitch, and impressed one with her look of blackness. Her skipper could swear to her record for thirty-two years—back of that he could not say. Possibly her builder could, but he was dead, "coom t' think o' it, ae auld man, too." However, for thirty-two years to the skipper's knowledge the Venus had pointed her nose out toward Dogger Bank and found her way home again, which proved that she had been a soundly built craft in the beginning, for "as th' sees for th'self, she arn't foond bottom yet."—From "On a North Sea Smack," by James B. Connolly, in the May Scribner's.

## NOTICE TO MARINERS.

BAR POINT SHOAL LIGHT-VESSEL No. 59.—Notice is hereby given that, on or about April 29, 1902, Light-Vessel No. 59 will be replaced on her station and the gas-lighted buoy, temporarily marking the station, will then be withdrawn.

The station is off Bar Point Shoal, northwesterly part of Lake Erie, at the mouth of Detroit Rver, and about 1½ miles to the southward and westward of Bar Point, Canada.

By order of the Light-House Board:

N. H. FARQUHAR,
Rear-Admiral, U. S. Navy, Chairman.

LIGHT-HOUSE ESTABLISHMENT,
OFFICE OF THE LIGHT-HOUSE INSPECTOR, NINTH DISTRICT,
CHICAGO, ILL., April 29, 1902.

CALUMET BAR BUOY.—Notice is hereby given that on April 28, 1902, a Third-class Spar Buoy was established in 21 feet of water, about 300 feet to the northward of a 17½ foot lump on Calumet Bar, and in line with the North Pier of Calumet river.

Calumet Pierhead (South Chicago) Light-House bears S. 59° (S.W. x W. ¼ W.) 1⅝ miles from the buoy.

By order of the Light-House Board:

LUCIEN YOUNG,
Commander, U. S. N.
Inspector Ninth Light-House District.

Contract to Employ Master—Breach—Damages—Lien.—Where, after plaintiff had contracted to take charge of a vessel as master, but before he commenced performance, the owner refused him such employment, plaintiff has no lien on the vessel to secure his damages for such breach of contract, either under the maritime law, which gives no lien to a master for his wages, or under 2 Ballinger's Ann. Codes & St. Wash. § 5953, which gives a lien only for services rendered on board, and for non-performance, or malperformance of a contract for the transportation of passengers or property. The Laurel, 113 Fed. Rep. (U. S.) 373.

## TREASURY DECISIONS.

REPEAL OF TAXES ON PASSAGE TICKETS, ETC., BY VESSELS TO FOREIGN PORTS.

TREASURY DEPARTMENT, BUREAU OF NAVIGATION,
Washington, D. C., April 17, 1902.

To collectors of customs:

The attention of the officers of customs, owners and masters of vessels, etc., is invited to the repeal by the act of April 12, 1902, taking effect July 1, 1902, of the provision of schedule A, paragraph 13, act of June 13, 1898, amended by the act of March 2, 1901, which paragraph is as follows:

Passage tickets: Ticket, order, contract, or certificate for passage by any vessel from any port in the United States to a foreign port, costing fifty dollars, fifty cents; and for each fifty dollars or any part thereof in addition thereto, fifty cents.

Attention is also invited to Department Circular 65 of 1901, setting forth other taxes imposed by the act of 1898 affecting the mercantile marine, owners or masters of vessels, and seamen, which taxes were abolished by the act of 1901, above cited.

E. T. CHAMBERLAIN, Commissioner.

Approved: O. L. SPAULDING, Acting Secretary.

CENSUS OF PERSONS EMPLOYED IN NAVIGATION.

Statement of crews requested in Bureau of Navigation's letter of April 16 should include every person employed in any capacity on the vessel.

TREASURY DEPARTMENT, BUREAU OF NAVIGAT ON,
Washington, D. C., April 18, 1902.

Surveyor of Customs, Pittsburg, Pa.:

SIR:—Replying to your letter of the 17th instant, the statement of the crew of a vessel requested in the Bureau's circular letter of the 16th instant should include every person who shall be employed or engaged to serve in any capacity on board the vessel. Respectfully,

E. T. CHAMBERLAIN, Commissioner.

Approved: O. L. SPAULDING, Assistant Secretary.

INSPECTION OF FOREIGN STEAM VESSELS.

Application having been made through the Secretary of State for copies of laws of maritime nations having reciprocal relations with the United States, collectors and others will be notified when it shall have been determined that any foreign government having inspection laws requires American steam vessels to be inspected under such laws.

TREASURY DEPARTMENT, April 21, 1902.

SIR: In reply to yours of the 18th instant, you are informed that this Department at the present time is unable to inform you with what maritime nations this government has reciprocal relations, in the matter of steamboat inspection laws, in the absence of the copies of the laws of foreign governments, but has made application therefor through the Secretary of State. When received, collectors of customs and others will be netified by Department circular in the usual mnaner. The only positive information it has on the subject is that in relation to the Dominion of Canada, of which you have been fully informed in department circular No. 35, dated April 1, 1902, a copy of which has already been furnshed you.

You are further advised that when it shall be determined that any foreign government having inspection laws that would require American steam vessels to be inspected under such laws, and having fees therefor for such inspection, the fact will be made known by circular to collectors and others, which fact of itself will convey instructions that the steam vessels of such country shall pay equivalent fees when inspected in the United States, to be collected by chief officers of customs before delivering copies of inspection certificate to such steamers.

Respectfully,
O. L. SPAULDING, Assistant Secretary.

COLLECTOR OF CUSTOMS, Baltimore, Md.

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The London Admiralty Court has awarded the owners of the British steamer William Cliff £11,000 ($55,000) for salving the Cunard line steamer Etruria. The Etruria sailed from New York, Feb. 22, for Queenstown and Liverpool. She was picked up in a disabled condition by the steamer William Cliff, and towed to the Azores.

## THE APPROACH TO THE "SOO" CANAL.

SAULT STE. MARIE, MICH., April 28, 1902.

Editor MARINE RECORD:

I take the liberty of sending you a clipping from a local daily paper, published at Sault Ste. Marie, regarding the condition resulting from the tug strike.

The article is none too strong, as to the danger to the lock, or still greater danger of collision with boats making for the lower entrance to the lock, and which are obliged to have tugs tow them into the lock. Was there a pier built from the north side of the lock down the river of proper length, boats could all make the lock without the use of tugs.

The private dock at the mouth of the canal, on the south side, should belong to the government, and boats not be compelled to tow around it. As it is, it means inflicting a toll on all boats entering the lock, up bound, besides being at the mercy of a tug, and always at the risk of damage to the lower lock gates, or of a collision with boats tied up at the private dock at the mouth of the canal. It seems strange to vesselmen to see the mouth of the greatest canal in the world owned by a private firm. R. H. H.

The clipping refered to in the foregoing is as follows:

"A contingency that is not improbable, if the tugmen's strike continues," said a prominent vessel man to the News-Record this morning, "is that the government may take a hand, so far as the "Soo" is concerned. It will be solely in the interest of protecting its property, if it does, but the Great Lakes Co. and the strikers may both suffer for their failure to reach an agreement.

"If you have been over at the locks since the strike was inaugurated, you will notice that boats that usually require the assistance of a tug, lock through with much difficulty and there is a great loss of time. It wouldn't take much of an accident, under present conditions, to play havoc with either or both of the locks, that might cause incalculable damage to shipping.

"It happened that a prominent government official went through on one of the big boats yesterday and he was not slow in sizing up the situation and before this he has made a report to the department at Washington. If the government should purchase a couple of tugs and enter the towing field here, the situation might be embarassing."

Supt. Ripley, of the ship canal, was seen by the News-Record this afternoon. He said there was considerable danger of steamers with schooners in tow entering the canal in stormy weather. The danger lies in the fact that a lock gate might be carried away, a pier damaged or a boat being sunk in the canal. If the strike continued any length of time, it would be necessary either for the government to secure the use of tugs or limit navigation through the canal. Mr. Ripley has made the fact of the situation known to Maj. Bixby, but did not know what action would be taken in the matter.

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Creation by State Statute—Enforcement in Court of Admiralty.—The provisions of Act. Pa. March 24, 1851 (P. L. 230), requiring vessels to take pilots when arriving at or leaving the port of Philadelphia, subjecting them to penalties for a failure to do so, to be recovered for the benefit of "the Society for the Relief of Distressed and Decayed Pilots, their Widows and Children," and making all sums due for pilotage and the penalties so imposed a lien upon the vessel chargeable therewith, relate to a subject which is maritime in its nature, and therefore the liens thereby created are valid, and may be enforced in the admiralty courts of the United States, as authorized by the act. The Lida Fowler, 113 Fed. Rep. (U. S.) 605.

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The Duluth News-Tribune says: Lansing R. Robinson, of the Union Transit Co., has returned from a business trip to St. Paul. He says that the millers of Minneapolis are entering a protest against the proposed advance in the export lake and rail rate on flour, 14½ cents to 18 cents, Duluth to New York, effective April 14. The millers say that conditions in Europe are such that they cannot ship to advantage under that rate.

## Government Proposals.

U. S. ENGINEER OFFICE. Jones Building, Detroit, Mich., April 19, 1902. Sealed proposals for dredging, and other work required for removing obstructions to navigation in main ship channel in Detroit river, will be received here until 12 noon, (Standard time), May 19th, 1902, and then publicly opened. Information furnished on application. W. H. BIXBY, Major, Engrs. 17-20

TREASURY DEPARTMENT, U. S. Life-Saving Service, Washington, D. C., April 19, 1902. Sealed proposals will be received at this office until 2:00 o'clock p. m., of Tuesday, May 6, 1902, and then publicly opened, for the construction of a wharf for the Old Chicago Life-Saving Station, Chicago, Illinois. Specifications and drawings, forms of proposal, etc., can be obtained upon application to the Superintendents of Construction of Life-Saving Stations, 17 State Street, New York City; Assistant Inspector 12th Life-Saving District, Room 543 Rand-McNally Building, Chicago, Illinois, or to this office. S. I. KIMBALL, General Superintendent.

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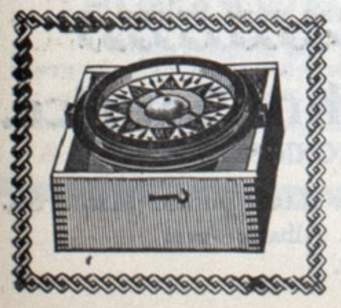

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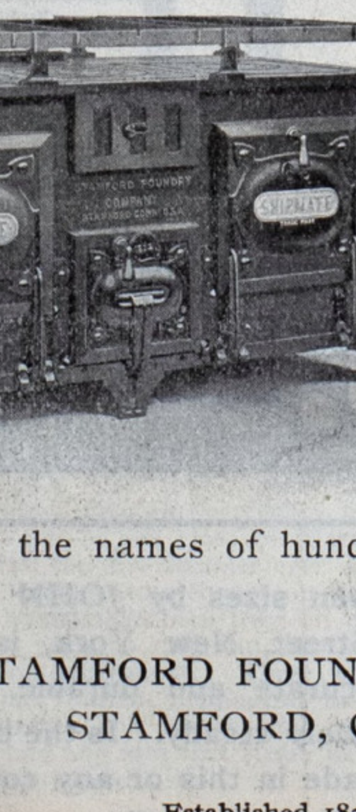

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Minnesota Iron Co.'s steamer Presque Isle.

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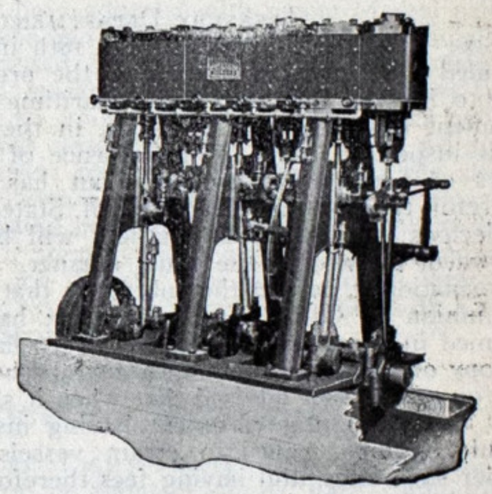

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## SUN'S AMPLITUDES.

The following approximate amplitudes of the sun's rising or setting will be given each week in this column during the season of navigation. A second bearing may be taken by compass at sunset, by reversing the east bearing given for the nearest latitude, as the change in declination for a few hours makes but a slight difference in the true bearing of the sun's setting. The bearing may be taken when the sun's center is on the horizon, rising or setting. The elements which may be obtained by taking these amplitudes are the quantities known as local attraction, variation and deviation, or the total difference between compass and true, or geographical bearings.

LAKE ERIE AND S. END LAKE MICHIGAN, LAT. 42° N.

| Date. | Amplitude. | Bearing P'ts. | Bearing Comp. |
|---|---|---|---|
| May 2 | E. 21° N. | = N. 6⅛ E. | = E. by N. ⅞ N. |
| May 9 | E. 23° N. | = N. 6 E. | = E. N. E. |

LAKE ONTARIO, S. END HURON AND CENTRAL PORTION LAKE MICHIGAN, LAT. 44° N.

| Date. | Amplitude. | Bearing P'ts. | Bearing Comp. |
|---|---|---|---|
| May 2 | E. 21° N | = N. 6⅛ E. | = E. by N. ⅞ N. |
| May 9 | E. 24° N. | = N. 5⅞ E | = N. E. by E. ⅞ E. |

N. END LAKES HURON AND MICHIGAN, LAT. 46° N.

| Date. | Amplitude. | Bearing P'ts. | Bearing Comp. |
|---|---|---|---|
| May 2 | E. 22° N. | = N. 6 E. | = E. N. E. |
| May 9. | E 25° N. | = N. 5¾ E. | = N. E. by E ¾ E. |

LAKE SUPERIOR, LAT. 48° N.

| Date. | Amplitude. | Bearing P'ts. | Bearing Comp. |
|---|---|---|---|
| May 2 | E. 23° N. | = N. 6 E. | = E. N. E. |
| May 9 | E. 26° N. | = N. 5¾ E. | = N. E. by E. ¾ E. |

With a compass correct magnetic, the difference between the observed and true bearing or amplitude will be the variation for the locality. Should there be any deviation on the course the vessel is heading at the time of taking the bearing. the difference between the observed and the true amplitude after the variation is applied will be the amount of deviation on that course. If the correct magnetic bearing is to the right of the compass bearing, the deviation is easterly. if to the left, the deviation is westerly.

Survivors of the bark Kathleen, which was crushed in midocean by a monster whale, have arrived on the British steamship Pydna. The Kathleen saw fifty-eight years of active service, and was built in Philadelphia in 1844.

## Government Proposals.

TREASURY DEPARTMENT, Office of General Superintendent U. S. Life-Saving Service, Washington, D. C., April 26, 1902. Sealed proposals will be received at this office until 2 o'clock p. m. of Monday, the 26th day of May, 1902, and then publicly opened, for furnishing supplies required for use of the Life-Saving Service for the fiscal year ending June 30, 1903; the supplies to be delivered at such points in New York City, Grand Haven, Mich., and San Francisco, Cal., as may be required, and in the quantities named in the specifications. The supplies needed consist of beds and bedding, blocks and sheaves, cordage, crockery, furniture, hardware, lamps, lanterns, etc.; medicines, etc.; paints, oils, etc.; ship chandlery; stoves, etc.; tools and miscellaneous articles; all of which are enumerated in the specifications attached to the form of bid, etc.; which may be obtained upon application to this office, or to the Inspector of Life-Saving Stations, 17 State street, New York City; Superintendent Twelfth Life-Saving District, Grand Haven, Mich.; and Superintendent Thirteenth Life-Saving District, New Appraisers' Stores, San Francisco, Cal. Envelopes containing proposals should be addressed to the "General Superintendent U. S. Life-Saving Service, Washington, D. C." and marked on the outside "Proposal for Annual Supplies." The right is reserved to reject any or all bids, and to waive defects, if deemed for the interests of the Government. S. I. KIMBALL, General Superintendent. 18-19


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| | Lake Captain | | Mechanical Engineer |
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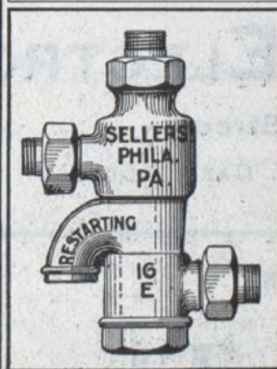


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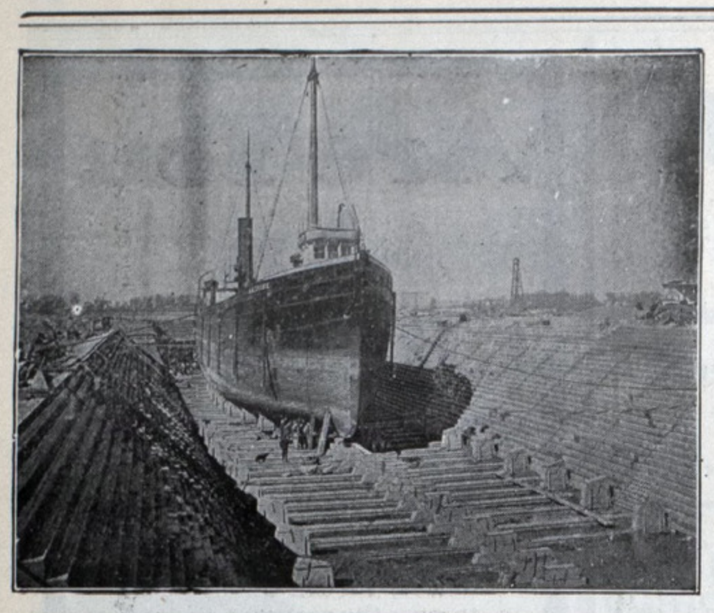

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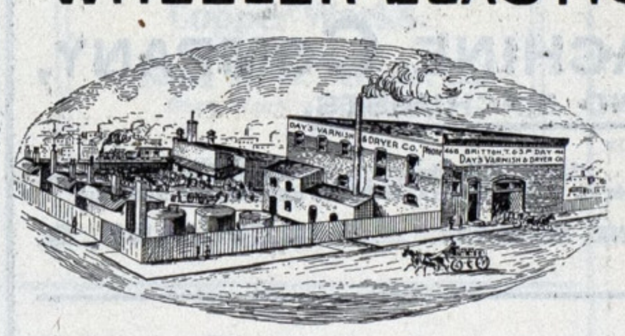

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